

Inside Dope

By GEORGE
F. TAUBENECK



Learn to live and laugh —
thus delay your epitaph

**Happy Farewell
To 1955 Baseball
Air Conditioning, To Start
And Chilly
Who's Smart?
You Just Can't Find
Them No More
Shall We Get Scientific?
It Must Be the Humidity
Here's An Idea**

Happy Farewell To 1955 Baseball

Annually at World Series time "Dope" presents lovingly gathered baseball anecdotes. Baseball, we have found, is one topic on which all Americans—whatever they do for a living—are united in their interest.

First instalment follows. More next week.

Air Conditioning, To Start

When Joe Engel (owner of the Chattanooga S.A., baseball team) gets mad at the umpires, he shuts off the air conditioning system in their dressing room.

And Chilly

Almost everybody in Pittsburgh loves Chilly Doyle. And that's a record of some sort.

Chilly has been newspapering the Pittsburgh Pirates for 40-odd years. During that elongated period of sports coverage he should have built up a formidable body of enemies.

Instead, fans are loyal to him on a grand scale. One reason: his entertaining *lapsis linguae*. Samples:

"The Pirates will do all their flying by air this season."

"If Barny Dreyfuss were alive today he'd turn over in his grave."

Doyle also is famous for his breakfast: a banana split and a double Old-Fashioned.

Who's Smart?

Superstitious "Whitey" Weitzel was sent to a doctor after being spiked.

"Brace yourself for 13 stitches," warned the surgeon.

"Doc!" frantically the ballplayer, "make it 14."

Gee Walker, Tiger outfielder (1931-37), tells this on himself:

"The Yankees pulled the hidden ball trick on me in New York after warning me they were going to do it. Red Ruffing and Frank Crosetti told me what was going to happen.

"Yet there I was with a lead
(Concluded on Page 6, Col. 1)

'56 Kelvinator Models Out Early To Meet Demand

DETROIT — Kelvinator announced Sept. 23 that it has unveiled five new refrigerators and four 30-in. electric range models, months ahead of schedule, in a surprise move to replenish field inventories depleted by exceptionally high mid-year sales.

Walter Jeffrey, vice president in charge of sales, said the introduction date for range and refrigerator models in shortest supply was advanced by three months to meet the emergency.

"Rescheduling our introduction was the only solution to the dwindling field inventory situation that we are now facing, and the out-of-stock problem that was shaping up before our normal winter introduction period," Jeffrey said.

"Comparison of 1955 sales with like periods of 1954 show the 1955 quarter ending June up 69% over the same quarter in 1954. July and August were two of the best summer months in Kelvinator's sales history, with August factory sales up 93% over August, 1954. Figures like these could only mean we were selling ourselves out of
(Concluded on Page 4, Col. 1)

G-E Ups Prices 10% On Motor Repairing

NEW YORK CITY—General Electric Co. has raised prices 10% for rewinding and reconditioning of all motors up to 500 hp.

A statement from G-E's service shops department attributed the increase to higher costs for copper and other materials, and higher overhead costs.

The Allis-Chalmers Mfg. Co. recently announced a 10% increase in certain prices, including those for rewinding and reconditioning of motors.

Copper Situation Somewhat Brighter; Speed Recovery from Flood Damage

NEW YORK CITY—With traditional Yankee ingenuity and industry, the copper and brass mill workers of Connecticut's Naugatuck valley have pitched in to dig out from under the tons of mud and debris left in the wake of the disastrous flood of Aug. 19, says a representative of the Copper & Brass Research Association, making an on-the-spot survey of its flood-damaged member companies.

Following the hurricane Diane, hundreds of billions of gallons of water poured down the Naugatuck valley, a rampaging torrent with the force of Niagara that wrecked buildings and bridges, washed out fifty miles of railroad and buried
(Concluded on Back Page, Col. 1)

Chicago Studies Special Fees For Conditioning Water Users

CHICAGO—Chicago city officials are considering the possibility of charging special fees for "big" users of water for air conditioning systems.

The large drain on the city's water system caused by a sharp increase in the use of air conditioning systems has prompted a study of the situation, states H. H. Gersten, assistant chief water engineer for Chicago.

Gersten informed James W. Jardine, commissioner of water and sewers, that during peak days in the heat wave of the past summer, air conditioning systems accounted for more than 250 million gallons of water a day. This was one-sixth of the city's total water consumption during these days of peak usage.

Water usage begins in the 3-ton and 5-ton units used in stores, restaurants, commercial establishments, and homes, Gersten said. He stated that water consumption for air conditioning units average 1½

gals. per minute per ton of capacity—or 2,160 gal. per ton per day, if the unit runs 24 hours.

One remedy, Gertsen pointed out, is the use of water saving devices (cooling towers and evaporative condensers) which cut water use to 5% or less of the amount used when no recirculating device is employed. While such devices add to the original cost of the system, they pay for themselves in savings in water charges within a relatively few years, Gertsen
(Concluded on Back Page, Col. 3)

Air Cooling Booms In Calif. Heat; Market 'Broken'

LOS ANGELES — Industry observers here believe that the recent heat wave, worst in Southern California's history (8 consecutive days over 100), may have finally "broken" the air conditioning market in this area.

In the past the southern California area, particularly the region along the coast, has been rated as only a "fair" market for air conditioning. But there is some evidence that the heat wave may have altered that rating.

The general picture seems to be that room air conditioner dealers, who were more or less resigned to 1955 business being from 25 to 30% off, were swamped with business with the result that increases of 25 to 40% are insight. One dealer declared that in two days he sold more room units than in the previous three years.

A representative of a manufacturer with a broad line of air conditioning equipment offered his observations as follows:

"On about the fourth day of the heat wave, with no relief in sight, room air conditioner sales went wild. Many dealers could not take any more orders because their installation crews could not catch up. Many dealers
(Concluded on Back Page, Col. 4)

Locker Plant Trend: Serve Freezer Owner

NFFLI Meeting Told Locker Patronage Drops But Food Plans Rise

By John O. Sweet &
George M. Hanning

CINCINNATI — Faced with gradually declining locker patronage, locker plant operators are changing with the times and directing more and more of their efforts to serve owners of home freezers.

This became abundantly evident at the 16th annual convention of the National Frozen Food Locker Institute staged here recently.

The locker operators heard results of two surveys that indicated the great extent to which home freezer owners have moved into their field of interest. And they crowded two major panel sessions devoted to problems of administering freezer-food plans.

Manufacturer interest in the locker and frozen food center field as an important factor in selling freezers was evidenced by 18 displays by freezer producers, who either had complete food plans for locker operators or wanted operators to handle their freezers in the operator's own freezer-food plan.

Robert Madeira, executive secretary of the NFFLI, reported that last year's division of association members into
(Concluded on Page 21, Col. 3)

Baltimore Aircoil Names Forseille and Kahlert

BALTIMORE — Richard W. Pentecost has resigned as general sales manager of Baltimore Aircoil Co., Inc. and Ray R. Forseille has been appointed vice president in charge of sales, it was made known recently by John Engalitcheff, Jr., president.

For the past eight years, Forseille has served as vice president in charge of produc-
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Ind. RSES To Meet Sept. 30, Oct. 1 In Evansville

EVANSVILLE, Ind.—Eighth annual convention of the Hoosier State Association of RSES will be held Sept. 30 and Oct. 1 at the Hotel McCurdy in Evansville.

On Friday, Sept. 30, the members are invited to take a tour through the Seeger Refrigerator Co. plant. A night meeting starting at 8 p.m. will open with a business session, followed by a talk by Robert Sly of Southern Indiana Gas & Electric Co. on power problems in refrigeration and air conditioning. A buffet supper and entertainment will follow.

On Saturday, Oct. 1, the morning session will have talks by James H. Holben of Bradford Laboratories on "Water Treatment for Cooling Towers"

and by W. H. Krack of Sporlan Valve Co. on "Moisture." In the afternoon Thomas J. Amenn of Kinetic Chemicals will give a talk and demonstration on "Freon" refrigerants, and George Lamb, consultant, will talk on piping problems. There will be a banquet and floor show on Saturday night after the meetings as a close to the convention.

Janitrol Names Calhoon Advertising Supervisor

COLUMBUS, Ohio—The appointment of J. Thos. Calhoon to the position of advertising supervisor has just been announced by H. C. Gurney, sales manager of the Janitrol Heating and Air Conditioning Div. of the Surface Combustion Corp. here.

Calhoon was formerly a copywriter and account executive with various Columbus advertising agencies.

'Flexazone' Central Unit Will Now Be Fully Pre-Assembled

LOS ANGELES — Drayer-Hanson's "Flexazone" central plant air conditioning equipment will now be completely factory pre-assembled before shipment, the company announced.

Drayer-Hanson, Inc. said all but a few sizes will be affected by the change. Previously this air handling equipment had been dispatched to job sites in three sections: fan, coil, and plenum.

Advantages claimed for pre-assembly are a complete positive alignment of units and reduction in shipping cubage.

The company said the only structural change involved is relocation of the mounting channels. Repositioning will take full advantage of extra strong mounting channel.

A. O. Smith Expands Kankakee Facility

MILWAUKEE—A \$4,400,000 expansion program at its Kankakee (Ill.) Works is now under way, A. O. Smith Corp. announced recently.

The program will be completed by late 1956 and will result in the addition of 270,000 sq. ft. of additional manufacturing and storage space, increasing present area by 50%.

A. O. Smith manufactures its glasslined "Permaglas" domestic water heaters, "Burkay" commercial water heaters, and a line of home heating and air conditioning equipment at Kankakee, in addition to the "Harvestore," a glass-coated steel farm silo and its industrial counterpart, the Permaglas storage unit.

Production facilities for warm air furnace and air conditioner lines will be expanded.

Fogel Appoints Dunn Canadian Sales Mgr.

PHILADELPHIA — Urban L. Carter, export sales manager of the Fogel Refrigerator Co., announced the appointment of Don Bayley Dunn as Canadian sales manager.

Dunn has been active in the Canadian commercial refrigeration industry for the past 20 years and was formerly associated with E. J. Wright Utilities Ltd., and Frigidaire Products of Canada Ltd.

Fla. Local Loses Heavy Cooling Jurisdiction Fight

WASHINGTON, D. C. — The National Labor Relations Board has ruled against a Jacksonville, Fla. local of the United Association in a case involving a jurisdictional dispute over unloading, rigging, and erection of heavy refrigeration equipment.

The NLRB ordered Plumbers & Steamfitters Local 234 to stop discouraging its members or affiliated members from working for Carrier Corp., or any of its subcontractors, "for the purpose of requiring Turner Transfer, Inc., or any other subcontractor to engage in discriminatory employment of members of Local 234 to perform the unloading, rigging, and erection of knockdown centrifugal compressor equipment and other heavy refrigeration machinery."

Involved in the case was a dispute between Local 234 and an ironworkers' union over assignment of the work performed by Turner under its contract with Carrier.

A majority of the board concluded: "It is clear, as found by the trial examiner, that the object of the respondents' conduct was to force Turner to violate Section 8 (a) (3) of the [National Labor Relations] Act, by discharging his employees and hiring members of the respondent union."



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was first of its type in the field, and for years has set the pattern for others to follow.

At Copeland you'll recognize an unmistakable eagerness not only to maintain present high standards, but to work day, night and vacations to improve them . . . to make present products better and to develop soundly engineered new ones.

In addition to design, engineering and a valuable store of production “know how” at Copeland, we feel we have added the friendly smile and the genuine willingness to go beyond the call of ordinary business courtesy to help a customer. That's a policy we'll never change.

We sort of thought you'd like to know our policy of doing business. So we set down these plain facts. We rather think you'll enjoy and will profit by doing business with Copeland.

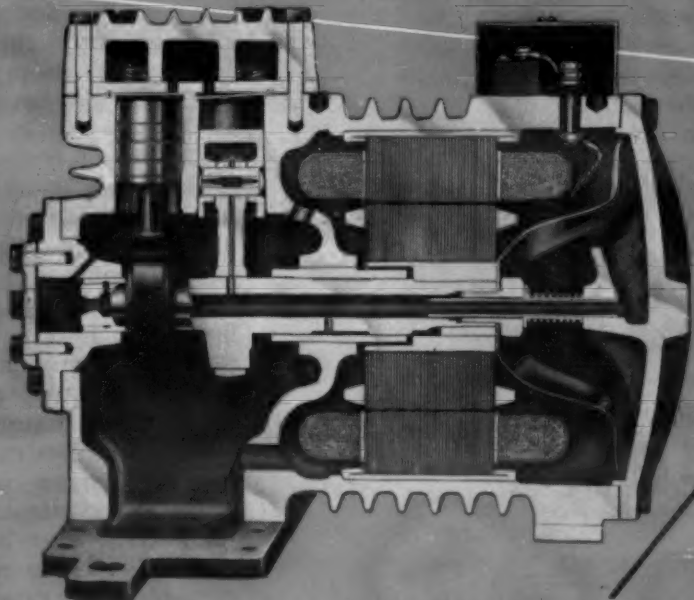
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90% of service costs removed.

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COPELAND REFRIGERATION CORPORATION SIDNEY, OHIO

'56 Kelvinator Models Offered To Early Meet Demand--

(Concluded from Page 1, Col. 2)

business unless we released quickly the 1956 models already in production but planned originally for later release," Jeffrey said.

Advance guard of Kelvinator's 1956 refrigerator line are five new eight and 10.6-cu. ft. refrigerators, all with extra large frozen storage capacity.

Two models feature "Magic Cycle" defrosting, while another has the Kelvinator "Magic Shelf" for quickly making extra room for tall bottles and bulky foods. Eight-cubic foot models boast new, deeply-recessed doors with extra capacity and all five models feature new, "sand tone" interior styling to harmonize with any kitchen decor.

Announcement of the new refrigerator models was made by F. J. Worden, sales planning manager for refrigeration products.

Model K46F-11 has Magic Cycle defrosting and 10.6 cu. ft. of refrigerated storage in a cabinet 28 in. wide. Freezer chest and meat tray will store up to 70 lbs. of frozen foods.

This model comes in eight custom colors plus lustrous white.

A roll-out shelf offers two-way convenience. It doubles as a serving tray when taken out. By rolling the shelf forward, small items in the rear or tall bottles may be easily reached.

Model K44F-11, 10.6-cu. ft. capacity in a 28-in. cabinet, stores 70 lbs. of frozen food in the frozen food chest and full-width meat tray. The manually-defrosted refrigerator has five door shelves for snacks, eggs,

Model

K46F-11

K44F-11

K26F-8

K24F-8

K22F-8

Description

Pushbutton automatic defrosting; roll-out shelf; "Magic Shelf; twin porcelain crispers; eight colors plus white. Polystyrene twin crispers; adjustable shelf; manual defrost.

Pushbutton automatic defrosting; dairy chest; four door shelves; full-width crisper.

Dairy chest; four door shelves; full-width crisper; manual defrost.

Five door shelves; manual defrost; four gold-finished interior shelves.

*\$15 additional for color.

Suggested

Retail Price

\$339.95*

289.95

259.95

239.95

199.95

MARSH Instruments

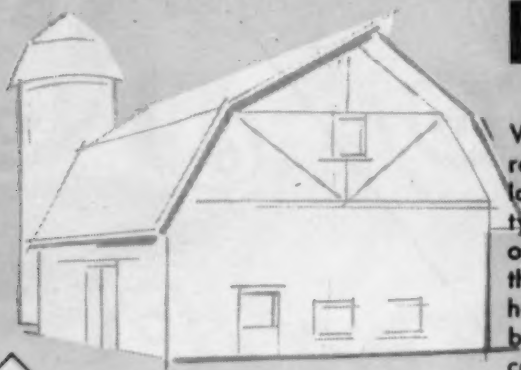
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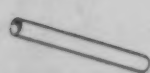


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TUBULAR PARTS



"MAGIC SHELF" adds flexibility in 1956 10.6-cu. ft. Kelvinator refrigerator.



"GREAT SCOT" oven in 1956 Kelvinator 30-in. deluxe range.

shelf with gold-finished guard rails especially designed for quart-size milk cartons and milk bottles.

The 24-in.-wide K26F-8 provides 56 lbs. of food storage in the full-width freezer chest and meat tray.

Model K24F-8 is the manually-defrosted companion to model K26F-8.

Space saver model K22F-8 has 8 cu. ft. of storage capacity in five roomy shelf areas and five handy door shelves that keep food and beverages easy to see and reach. It will store up to 56 lbs. of frozen food.

Four new 30-in. A56 electric range models, one with disposable aluminum foil oven linings, were announced by Kelvinator.

Kelvinator says that for the first time in the industry, disposable aluminum foil linings have been adapted for 30-in. ranges. Kelvinator has already paced the industry with foil linings in larger ranges. Model KR-F38 has disposable foil linings in the oven bottom as well as both sides to completely end oven-cleaning drudgery.

New thermostatic-action switches, applied to all four surface units for the first time, automatically control the electricity used at the surface units to satisfy all cooking needs.

NCRSA Reports Average Dealer Refrigeration and Air Conditioning Netted More, Cut Costs in '54 Distributor Sales Up 6% In July

PHILADELPHIA — Gain in net profit and reduction of expenses were recorded in 1954, based on the averages of 27 members reporting their overhead expense figures to National Commercial Refrigerator Sales Association here.

A detailed analysis of the 1954 figures and comparison with the five previous years has been sent to NCRSA members, announces Marie H. Lawton, executive secretary of the association.

Highlights of the study are as follows:

Net profit after income tax for 1954 averaged 3.2% of total net sales, compared to 2.75% in 1953.

Gross margin on all sales in 1954 averaged 31.42%, up from the 28.73% average of the 1953 report.

Sales expense in 1954 averaged 7.58%, compared with 8.91% in 1953. "Sales expense" includes salesmen's compensation, travel, entertainment, advertising, engineering, layouts, etc.

Expense of delivery, installation, and service averaged 12.28% in 1954, an increase over the 10.2% average reported in 1953.

Total administrative expense was down in 1954, averaging 5.63% compared with 7.22% the previous year, the report showed.

Occupancy expense averaged 2.24% in 1954, 2.27% in 1953. Miscellaneous expense averaged 1.54% in 1954, 1.38% in 1953. Taxes, not including state and

Federal income taxes, amounted to .5% in 1954, .47% in 1953.

Total of the above expenses averaged 28.12% in 1954, down from the 30.21% average of 1953.

Federal and state income taxes averaged .74% in 1954, .98% in 1953.

Additional financial data contained in the report shows that the average net worth of 21 NCRSA members reporting in 1954 was \$97,539 with the high being \$261,709 and the low \$20,904.

Average current assets of 20 members totaled \$112,529. High was \$341,157, low \$31,068.

Current liabilities of 20 members amounted to an average of \$46,683. The high was \$142,658, the low \$4,311.

WASHINGTON, D. C.—July sales of air conditioning and commercial refrigeration equipment distributors were up 6% from a year ago and topped June volume by 1%, according to the Bureau of the Census statement.

Sales in July by distributors of electrical appliances, TV and radio sets and parts, and electronic equipment and parts rose 20% compared with July, 1954, and were 13% ahead of June.

For the first seven months of 1955, sales of air conditioning and commercial refrigeration equipment distributors were 12% higher than in the like year-ago period. The appliance group sold 9% more merchandise in the seven-month period, it was added.

End-of-July inventories of the air conditioning and commercial refrigeration distributors were down 6% from a year ago and 8% below the June 30 level. Those of the appliance group increased 8% compared with stocks on hand a year ago but dropped 9% below inventories at the end of June.

July sales of all reporting merchant wholesalers as a group were down 7% from June but were 8% higher than July a year ago. Sales for the first seven months of the year were 8% higher than those in the comparable 1954 period. Inventories at the end of July were at about the same level as a month earlier but were 1% above stocks on hand a year ago.

Egg Farmers Realize 200% Return on Refrigeration Costs

PHILADELPHIA — Most poultrymen can pay for a refrigeration unit in a year or two from the extra income from cool eggs, reports *Farm Journal* in its September issue.

A 200% return on a little investment, says the farm magazine, is about the way extra profits figure out by cooling eggs and keeping them cool from the time they are gathered until sold.

The publication cites tests run by Dr. William J. Stadelman, Washington State college poultry scientist, and his co-workers. In extensive tests, they found that it costs about one-half cent to refrigerate a dozen eggs. The return is almost 1½ cents more per dozen, because the eggs grade higher.

Freezing Candy Seen As Solution to Peak Demand Problem

EXPERIMENT, Ga. — Candy manufacturers and handlers might benefit through use of cold storage, in the opinion of Dr. J. G. Woodroof, food technologist of the Georgia Experiment Station.

After five years of experiments, Dr. Woodroof said that more than 85% of all candy can be stored frozen. Thus, he explained, it could be stockpiled to permit manufacture at slack periods for such special occasions as Mother's Day, Valentine Day, Christmas, and the like.

"A few candies, we found from our experiments, cannot be frozen without injury," he continued. "These include chocolate-coated chips, hard candies, brazil nuts, and caramels."

"Almost all others can be stored frozen and some actually are improved in quality," Dr. Woodroof said. Among the latter he listed marshmallows, jellies, fudges, divinities, coconut macaroons and bonbons, fruit loaves, panned Easter eggs, malted milk bars, and chocolate puffs.

He cautioned that frozen candy must be stored in moisture-proof packages in dry rooms and gradually returned to room temperature before opening for sale.

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Inside Dope

By GEORGE
F. TAUBENECK

(Concluded from Page 1, Col. 1)
off second and Crosetti between me and the bag.

"Look what I've got, Gee" said Crosetti, showing me a nice white ball.

"You so-and-so" said I. "If you put that ball on me I'll break your neck."

"So he tossed the ball to Joe Gordon, grinning: 'Here, Joe, you tag him.'"

Keystone-sacker Bobby Avila (Cleveland) credits his Mexican father for an assist in his concentrating on baseball.

Avila (pronounced AHveelah) hungered for soccer prominence as a kid. This sport his father did not like—because it wore out too many shoes.

"Father tell me he show me how to use shoes. He deed. It hurt, So I play baseball."

You Just Can't Find Them No More

What with fantastic bonuses, five-figure salaries, etc., today's ball players seem *moneymad* to oldtimers.

Ernie Diehl is a case-in-point. Thanks to an inheritance, Ernie pastimed with Cincinnati, Boston, and Pittsburgh without accepting a dollar in salary.

He just loved to play baseball. Incidentally, his lifetime batting average was a respectable .289.

Shall We Get Scientific?

Ivory-hunting baseball scouts soon may have an answer to their prayers in a device being developed by Bausch & Lomb Optical Co. When and if it is perfected, there will be little risk in signing Bonus Babies.

For more than three years junior engineers in that optical manufacturing firm tested players in the Rochester (International League) team to determine their baseball skills in relation to their vision.

"We have found we can establish a workable set of visual standards," declares C. J. Davis. "Using these standards, we have been able to predict—to a degree much greater than chance—how players will stand at the end of the season in relation to other members of the team or league."

Eyesight tests on the Rochester players were made with a B. & L. instrument called an Ortho-Rater. This is a device which will show whether an individual is near-sighted or far-sighted; how well he can judge the distance between his eyes and a particular object ("depth perception") and how well his two eyes work together when he's reading, working, or watching action at a distance.

B. & L. researchers think the Ortho-Rater may provide answers to such questions as why pitchers sometimes can't hit, and whether batting and fielding slumps can be forecast in advance. For instance: Depth perception is the most important visual ability for infielders and outfielders.

Huge majority of baseball players, whose eyesight exceeds

depth perception standards on the Ortho-Rater, achieved fielding averages in the upper half of the International League's roster for each position. The Ortho-Rater tests also indicated that eyesight plays a decisive role in batting success. Tested batters who qualified on this scientific instrument scored twice as many hits, runs batted in, and doubles and triples as did those tryers who flunked.

Pitching and batting require opposite visual characteristics. Hurlers focus both their eyes on the plate and strike zone. To be successful, their two eyes must work as a unit.

Of the pitchers who passed the Ortho-Rater's A.C.A. ratio standards over the three years, 90% ranked in the top half of the team's hurlers. Among those who failed this test, only 18% were able to make the top half of the pitching list.

Pitching thus calls for eyes to work together; whereas batting needs one-eye performance.

A suggestion for B. and L.: Could you develop an eyesight tester for umpires?

It Must Be the Humidity

New record for "the books": three runs driven in on a sacrifice fly! Here's how:

With the bases loaded Blue-field's John Li Prado banged a long fly to center. Kingsport's John Charles caught it, but fell into a thorny hedge. All three baserunners scored while the Kingsport centerfielder untangled himself.

Phenom Ernie Banks of the Cubs (1955) was plinked painfully on his nose by Ronnie Kline of the Pirates.

"That should teach you," commented veteran Hank Sauer,

whose proboscis rivals the schnozz of Jimmy Durante.

"Hmph," snorted Ernie, "if you'd taken that fast ball on your nose it wouldda been a single, at least."

"I've learned one thing," Lou Boudreau (manager of Cleveland, Boston, and Kansas City) avers:

"When a man's down, people stomp on him. You look up and all you see is the spikes in their shoes."

Affixed to the Outer Door of Cub's traveling secretary Bob Lewis's office is:

"Notice: While in this office, speak in a low, soothing tone and do not disagree with me in any manner. Please be informed that when one has reached 'my age,' NOISE and NON-CONCURRENCE cause gastric Hyper-Peristalsis, Hyper-Secre-

tion or Hydrochloric Acid and Rubus of the gastric mucosa and I GET UNPLEASANT."

Here's An Idea

Few fans who read box scores religiously know how many assists and putouts are made by anyone. Why, then, are two box-score columns reserved for putouts and assists?

Suggestion: In their outmoded places should appear newspaper recognition of runs, singles, doubles, triples, and RBI, we say. With such a revamped box score fanatic fans could ascertain just what each hitter did for his club.

It is the Most Valuable Hitter who captures the fancy of genuine lovers of baseball, rather than the "good field no hit" Fancy Dan in these days of the lively ball and shortened fences.

APPR

Leading Refrigeration and Air

genetron®



Look at the stringent manufacturing specifications listed here for the principal "Genetrons." Note their exceptionally low moisture content. For example, "Genetron" 12 and "Genetron" 141 are so dry they contain less than ten parts of water per million parts of refrigerant. That's moisture equal to only one thousandth of one percent (0.001%).

The overall purity of "Genetrons" is equally good. See how low they are in non-condensable gases and low boiling impurities. And, remember the quality of current production consistently surpasses even these specifications. No wonder so many leading manufacturers now prefer "Genetrons" as original charge for their equipment!

genetron 12—WHITE LABEL

DICHLORODIFLUOROMETHANE

Quality Specifications

Moisture wt. %, max.	0.0010
Chlorides	none
High boiling impurities—vol. %, max.	0.05
Non-condensable gases (gases insoluble in perchloroethylene)—vol. % in vapor phase, max.	1.5
Boiling pt. at 760 mm. Hg. °F.	-21.6
Boiling range °F (to 85% pt.), max.	0.9

genetron 141—GREEN LABEL

MONOCHLORODIFLUOROMETHANE

Quality Specifications

Moisture wt. %, max.	0.0010
Chlorides	none
High boiling impurities—vol. %, max.	0.05
Non-condensable gases (gases insoluble in perchloroethylene)—vol. % in vapor phase, max.	1.5
Boiling pt. at 760 mm. Hg. °F.	-41.4
Boiling range °F (to 85% pt.), max.	0.9

genetron 11—ORANGE LABEL

TRICHLOROMONOFUOROMETHANE

Quality Specifications

Moisture wt. %, max.	0.0015
Chlorides	none
High boiling impurities—vol. %, max.	0.05
Boiling pt. at 760 mm. Hg. °F.	74.7
Boiling range °F (to 85% pt.), max.	0.5

Lewyt Moves To Get Nationwide Distribution Of Wall Air Conditioners; Oberc Named In Detroit

DETROIT—Appointment of J. M. Oberc, Inc. as Detroit area distributor for the Lewyt built-in wall air conditioner marks one of the moves now being made to expand distribution of this product on a national basis, declared Irving Bottner, Lewyt Air Conditioning Corp. vice president, at a sales meeting held here by the Oberc firm.

The Oberc firm will represent Lewyt in sales of its units to builders of new apartment houses, private homes, hotels, motels, and factories. Headed by J. M. Oberc, the Detroit firm is a pioneer in the distribution of air conditioning and refrigeration equipment, and parts and supplies.

The Lewyt built-in wall air conditioner was introduced last February. It is 32 in. wide, 14 in. high, and 15 in. deep. It is being manufactured in 1/2-ton, 3/4-ton, and 1-ton capacities. In appearance inside a room, the Lewyt air conditioner looks like a radiator grille, and is virtually flush with the wall. The unit fits into a sleeve casing under a window, or along any outer wall, and is adaptable to various wall thicknesses.

The firm is a division of Lewyt Corp., well-known manufacturer of vacuum cleaners headed by Alex Lewyt. The air conditioning division was organized a few years ago under the name of Tywel Corp., and was first operated as a con-

tract manufacturer of room air conditioners. Sometime after it started to distribute the built-in wall unit, the decision was made to change back to the Lewyt name, to capitalize on the reputation built by the parent firm.

Distribution Was Held To Eastern Area

Distribution of the wall unit was confined earlier this year to the New York, New Jersey, and Connecticut area. Bottner says that by the end of the year some 25,000 wall units will have been sold in that area, primarily to builders and to apartment houses.

In the distribution setup, the

distributor will probably handle sales to the large builder, but installing air conditioning dealer-contractors will be franchised to sell to the small unit builder, and to existing homes.

Special equipment has been developed to cut through walls—even those made of brick—in existing structures, and installation costs in existing homes should not generally go above \$50-\$60. The wall unit has been approved for inclusion in FHA mortgages in the New York area, Bottner says, and he sees no reason why it will not get approval in other parts of the country.

Vacuum Cleaner Dealer Not Being Considered

The type of appliance dealer that handles the Lewyt vacuum cleaner is not being considered in most cases as a suitable outlet for the Lewyt air condi-

tioner, because such dealers have few builder contacts, and aren't set up to handle the installation problem.

Lewyt has a variety of "propositions" for builders on the purchase of the wall unit. If a builder wishes, he can install only the "shell" (casing for the unit) and thus make air conditioning optional to the home buyer. Or, particularly for apartment houses, the shell can be installed and the unit added for an increase of \$6 a month in the rental charge.

Or Lewyt will even take over the matter of handling the rental of the unit, if the builder will install the shell—but Bottner says that such a rental agreement has yet to be signed, because when the builder thinks the matter over thoroughly he recognizes that the economics of the situation favor his doing the rentals.

A home could be constructed with a number of shells installed, of course, and units installed at such time as the owner felt he could afford them.

OVER!

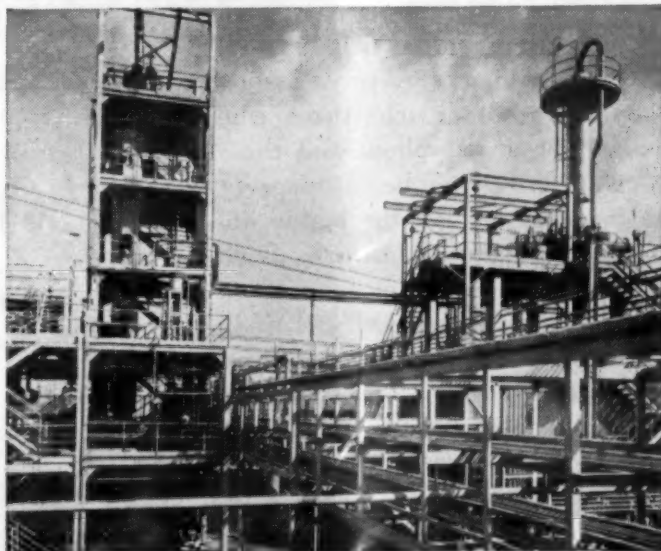
Conditioning Manufacturers All Approve...

Super-Dry Refrigerants

Few products have ever undergone such exhaustive examination as "Genetron" Refrigerants. Leading refrigeration and air conditioning manufacturers have checked and rechecked them intensively... proved for themselves that "Genetrons" meet or surpass their most exacting specifications for fluorinated hydrocarbon refrigerants.

Yes... in every case... "Genetrons" have been certified for the original or replacement charge in America's finest equipment. That's because they have been proved to be—

- ✓ Super-Dry—guaranteed exceptionally low moisture content.
- ✓ Non-toxic, non-flammable, stable, safe.
- ✓ Non-corrosive to standard equipment materials.
- ✓ Critical and freezing points well outside range of operating uses.
- ✓ Solvent action on oil helps prevent solidification or congealing of lubricant.
- ✓ Miscible with oil; aid in lubrication of equipment.
- ✓ Identical and interchangeable in all respects with comparable fluorinated hydrocarbon refrigerants produced by any other manufacturer meeting the same high standards.



READY SOON:

In addition to its expanded "Genetron" production center at Baton Rouge, La., General Chemical will soon have large new "Genetron" facilities in operation at Danville, Ill. These, plus others in the industry, assure refrigerant capacity to meet all needs for the foreseeable future.

Basic Chemicals for American Industry

GENERAL CHEMICAL DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 Rector Street, New York 6, N. Y.

See your refrigeration wholesaler



Boy and Goat Team Draw Prospects For Room Units

HUNTINGDON, Tenn. — A boy and a goat team hitched to a small wagon helped an Admiral dealer here sell 12 room air conditioners in one day recently.

According to Sam Gassaway, appliance sales manager of Orgill Brothers & Co., distributor of Admiral products in Memphis, Jackson, and Little Rock, the dealer, J. L. Jordan, hired the lad and his goat team to tour the town square during the day.

The wagon carried an Admiral room air conditioner and signs announcing the special sales promotion.

Many townspeople followed the young air conditioner Pied Piper each time he drove his goat team and wagon back to the dealer's store, a block from the square. The dealer credits this stunt with helping boost air conditioner sales.

Admiral Names Outlet For Evansville Area

CHICAGO — Appointment of Capital Appliance Distributors as distributor of Admiral products in the Evansville, Ind. area was announced recently by H. D. Conklin, general sales manager of Admiral Corp.

The firm is a branch of Capital Appliance Distributors of Indianapolis, Admiral wholesaler in that city. Kenneth Somers is general manager of the Evansville branch.

GENERAL SALES MANAGER

Well known Eastern manufacturer of air diffusers—a full line that has gained wide acceptance as a superior product—has an opening for a man with sales and management experience and who is well known in the air conditioning and ventilating industry. Must be able to appoint and direct sales agents, conduct sales meetings, etc. Attractive salary and bonus. Give complete resume which will be held confidential. Address Box A5335, Air Conditioning & Refrigeration News.

**You can join
with the NEWS
in a great new
attendance-building
program.**

The Ninth Exposition of the Air Conditioning and Refrigeration Industry, November 28 through December 1 in Atlantic City, promises to be the biggest and best show the industry has ever held! It's already broken almost every record set by previous shows. *More* space has been taken by *more* individual exhibitors, and *more* new equipment will be shown than ever before!

This year's Exposition can smash all records for attendance, interest and active participation, too! The NEWS will publish *three* big pre-show issues instead of one to make sure everybody in the Industry knows the news about the Exposition. Each issue will be jam-packed with news and feature stories. The NEWS will promote the Show through its editorial columns, publicity and advertisements alike!

This is a great opportunity for you to help promote attendance and interest at the show and to pre-sell your market at the same time! You'll get more return for your advertising dollar than ever before! You have not one but *three* chances to tell the whole industry you'll be at the Show, and tie-in your advertising and publicity with your exhibit at the Show!

Remember—pre-show advertising will hit your market just at the high point of buyer interest for the fall months. The three big issues are November 7, 14 and 21—and don't forget the traditional show issue November 28! Make plans now to be in all four issues—get your advertisements and publicity in as soon as possible. Reservations for space are being received now!

**SEE YOU AT
THE SHOW!**

**Remember These Three
Pre-Show Issue Dates!**

November 7
November 14
November 21

**Last Forms Close 10 days
preceding date of issue.**

This year... a completely new show promotion plan!

***You'll Get Bonus Results from Your Advertising
In the Show Promotional Issues of the News***

**Here's how every ad in
the Show promotional
issues of the NEWS
will pay off with
bonus impact.**

First, you get the full impact of the NEWS' concentrated circulation in the field. You'll be reaching the very people you want to reach—those who will be at the Show, and those who are your best prospects. Second, you get the bonus impact of *natural interest*. Each issue will be full of news about the Show, so your ad will tie-in directly to the reader's interest at the moment! Third, you get *added* bonus impact by *merchandising* your ads at the Show itself!

To help you get maximum association value from your advertising in all the Show promotional issues, the NEWS offers the most complete merchandising service in the industry:

- 1.** Your advertisement, mounted for display, will be presented to you by the NEWS at your booth. Plan to make your advertisement an integral part of your display, and take advantage of the repeat association you get when your prospects see your advertisement first in the NEWS—and again at the Show!
- 2.** Copies of the NEWS in which your advertisement appears can be sent to your selected customers and prospects. A special bargain price for these four November issues—only 15 cents per copy.
- 3.** Reprints of your ad will be available at cost. Ask your NEWS' representative how you can make the best use of our special merchandising service, both at the Show and before the Show.

**AIR CONDITIONING
& REFRIGERATION**
The Newspaper of the Industry

450 West Fort Street • Detroit 26, Michigan

The Newspaper That Carries More Advertising By Far Than Any Other Publication In The Field.

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Cleveland, 15515 Detroit Ave.
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Richard E. Cleary

NEWS



Audited Paid Circulation

Frozen Foods Trade Practices Hearing Aims Definitions, Rules On Supplying Cases to Retailers

WASHINGTON, D. C.—Discussion of proposed trade practice rules for the frozen food industry was heard by the Federal Trade Commission here recently.

David R. Stauffer, FTC attorney, chairmanned the hearing which gave industry members and others a chance to present their opinions on the proposed rules.

Much of the discussion centered about the FTC's definition of frozen foods and about rules that would prohibit manufacturers from supplying cabinets to retailers. It was not indicated, however, that the discussion would lead to any changes in the drafted rules on these subjects.

Industry Split on Excluding Some Items

While a spokesman for the National Association of Frozen Food Packers asked that the definition specifically exclude certain products and include others, other industry representatives present argued for keeping the definition just as it now stands.

Stauffer noted that defining industry products was a difficult job as new ones are being constantly added.

Meats, Poultry, Dairy Products Excluded

The current definition includes vegetables, fruits, juices, fish and shellfish, baked goods, and other miscellaneous prepared foods which are packed, marketed, and delivered to the ultimate consumer in a frozen state. Not included as products of the industry are meats and poultry, and frozen dairy products including ice cream and sherbets.

Stauffer explained that meats and poultry are excluded because they are exclusively under the jurisdiction of the U. S. Department of Agriculture. Frozen dairy products are excluded because they are involved in eight complaint cases against certain dairy concerns currently pending before the FTC.

In clarifying somewhat the prohibitions against manufacturers supplying retailers with display cabinets, Stauffer noted that the rule would not prohibit a manufacturer from supplying a retailer with a cabinet with the understanding that it is not to be used as a dispenser for competing brands. In such a case, a juice concentrate manufacturer could supply a retailer with a cabinet to handle his brand of juice only.

Prevention of Monopoly Is Objective

Purpose of the prohibition is intended to prevent the creation of a monopoly through requiring the dealer to handle the particular manufacturer's brands exclusively.

One representative at the hearing suggested that it was an unfair trade practice for ice cream companies that are also

in the frozen food business to exclude other food distributors by putting in cabinets from which they sell both their dairy products and other foods.

Atomic Radiation + Refrigeration

May Be Able To Extend Shelf Life of Some Food Items

WHITE SULPHUR SPRINGS, W. Va.—A lower dose of atomic radiation, combined with normal refrigeration facilities and polyethylene packaging, may be able to extend the shelf life of some fresh and cooked foods.

Dr. L. E. Brownell, supervisor of the University of Michigan's

Fission Products Laboratory, recently indicated that atomic radiation experts believe it is possible to expose some fresh meats to lower radiation level than previously without affecting flavor.

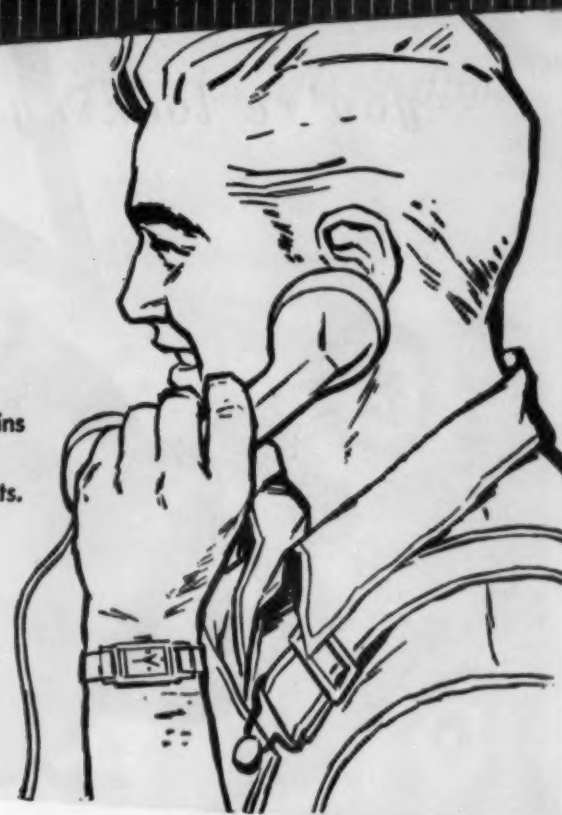
He indicated that a dose of about 100,000 reps (a radiation energy unit), of gamma radiation would extend the shelf life of refrigerated fresh meats by about two weeks.

He thought such treatment would now be feasible for roast whole chicken, broiled breast of chicken, blanched green peas, smoked fish, and cooked shrimp.

for
good service
...all along the
line

call your
ALCO
wholesaler

...he's the vital link
in our industry that joins
us all together for
mutual help and profits.



call for
ALCO 402
thermo valves

...they fit those tight
spots in small fixtures
(display cases, milk
coolers, freezers, etc.) ...
and can be installed
in any position!

Designers and Manufacturers
of Thermostatic Expansion
Valves, Evaporator Pressure
Regulators, Solenoid Valves,
Float Valves, Float Switches.



engineered for service for life

ALCO VALVE CO.

853 KINGSLAND AVE. • ST. LOUIS 8, MO.

RACCA Putting 'Qualified Contractor' Standards Program Into Effect



ABOVE: Illustration of large "Qualified Contractor" decal for applying to installation and service trucks and in the contractor's showroom and display windows.

LEFT: Picture shows "Air Conditioned by . . ." decal for application on customer's windows or doors.

Offer Decal Series To Members Who Comply with Standards

CLEVELAND — A series of three decals to identify "Qualified Contractors" are now ready for distribution to local associations by the national Refrigeration and Air Conditioning Contractors Association, W. Ray Kromer, executive vice president, announced recently.

The decals are available to all members in good standing who agree to abide by the standards for installation and maintenance of refrigeration and air conditioning equipment that have been established by the standards committee of the national association, Kromer said.

Standards Committee To Police Program

The standards committee of local chapters, who will have the job of policing the "Qualified Contractors" program, are to order the materials for qualified members from national headquarters, he explained.

Insignia of the "Qualified Contractor" carries the emblem of the national association—a strong hand and rubber stamp certifying approval of the member.

There is a large "Qualified Contractor" decal for applying to installation and service trucks and in the contractor's showroom and display windows.

There is a smaller decal bearing the contractor's name, for applying on products, tool boxes, and panel boards.

Thirdly, there is an "air conditioned by . . ." decal for application on customers' windows or doors.

An embossed metal seal with gummed back for use on letterheads, sales literature, and calling cards, is also available.

The Qualified Contractor program, Kromer declared, is intended to identify contractors in whom the public can place confidence and trust.

Contractor Conduct Rules Proposed to FTC

Toward this end, RACCA has already proposed a set of rules of conduct for refrigeration and air conditioning contractors to the Federal Trade Commission. These rules have been accepted by the FTC, he noted, as a basis for trade practice conferences to establish rules of practice in the refrigeration and air conditioning contracting industry.

When promulgated, he asserted, the rules will constitute the standards for doing business in compliance with existing fair trade practice laws.

RACCA, NBBB Cooperate On Education Film

To educate the public to the aims of the Qualified Contractor program, RACCA will, in cooperation with the National Better Business Bureau, prepare a film for national distribution.

The film will explain what true air conditioning is and what to watch for when purchasing it. It will emphasize the

(Concluded on next page)

you're looking at 5 hermetic compressors



MODELS P91, P6112, P61, P5312
single cylinder
hermetic compressors

THE FAMOUS *Tecumseh* PANCAKE
IN 1/8 — 1/6 — 1/5 H.P.

the same compact dimensions in a greater horsepower range

HOUSEHOLD REFRIGERATORS

FREEZERS

VENDING MACHINES

WATER COOLERS

Here's another achievement in Tecumseh's constant research to provide the refrigeration industry with functional compressor design and more efficient operation. The Tecumseh "Pancake" 1/8 and 1/6 H.P. compressor, recognized by the industry for its small size, low cost and high capacity, is now available in 1/5 H.P.

This means 5 compressors with the same outside dimensions, and yet offering a choice of 3 different fractional horsepower ratings. Manufacturers of household refrigerators will benefit because they may now use the pancake design on most models, thus saving tooling and production costs. Freezer, water cooler and vending machine manufacturers will be able to

take advantage of the pancake's small size in their design. All will gain needed space and still maintain top efficiency.

Internal spring mountings, force feed lubrication and a new, specially designed piston give smoother, quieter operation. Tecumseh's "Pancake" compressors also feature a welded steel shell which dissipates motor heat. This is aided by the cooling action of the suction gas and in some cases an oil cooler is added for faster cooling action and better efficiency. See your Tecumseh representative for complete information on how you can save time and money by standardizing your production line with the flexible Tecumseh pancake.

• over 21,000,000 Tecumseh compressors in use today

The World's Largest Producer of
Compressors for the Refrigeration Industry

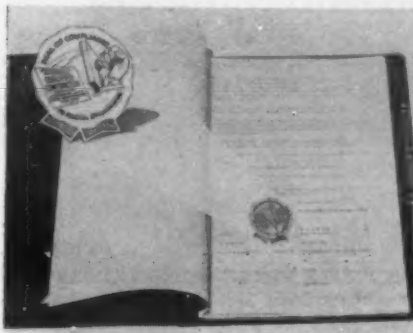
TECUMSEH PRODUCTS CO.

TECUMSEH

EXPORT DEPT.—P. O. Box 2280, 24530 Michigan Ave., W. Dearborn, Michigan

Marion, Ohio
Tecumseh, Michigan
Danville, Illinois

For more information about products advertised on this page use Information Center, page 14.



EMBOSSSED METAL Seal of Compliance with gummy back is provided for "Qualified Contractors" to use on letters, sales literature, bids, and contracts.

RACCA Decals--

(Concluded from preceding page)

safety and economy of doing business with contractors who are qualified to engineer, install, and maintain the equipment.

Film To Be Available Through Better Business Bureaus In 121 Cities

When produced, the film will be made available through local Better Business Bureaus in 121 cities for showing on local television stations and for loaning to contractor groups. The latter can show the film to service clubs, church groups, and at their own meetings.

Programs and other public education material for local association follow-up will be available from national headquarters, Kromer said. Local associations will invite the public to do business with qualified contractors, he added.

Airtemp Plans 33% More Business Each Year Through 1960

DAYTON—Chrysler Airtemp is making plans to do 33% more business in 1956 than it will do in 1955 and is initiating long-range programs to handle a similar increase during each of the next five years.

Basing plans and programs on the potential of the air conditioning and heating market—giving special attention to the rapid rise in the use of home air conditioning equipment and waterless air conditioning equipment—the company feels the 33% increase-per year figure is a realistic, perhaps on the minimum side, appraisal of future business prospects.

Airtemp is realigning key divisions of its operation. It has appointed: a new Forward Planning Committee, a Sales Manager and Merchandising Manager for each product line, and 10 new assistant regional sales managers.

McQuay Names Buck Eastern Region Head

MINNEAPOLIS — H. Blake Thomas, executive vice president of McQuay, Inc., announces the appointment of Willard B. Buck as eastern regional manager.

Buck joined McQuay in August, 1947, and has served McQuay both in the home office and as a franchised representative in the field. Buck was formerly assistant manager of the heating and air conditioning department.

Tamper-Proof Features Included

New Jersey Mental Hospital Gets Year-Round Systems

ANCORA, N. J.—Completion of a \$1,800,000 air conditioning, heating, and ventilating system for New Jersey's multi-million dollar state mental institution here has been announced by Charles Simkin & Sons, Inc., Perth Amboy mechanical contractor.

Fresh air conditioning and steam heat is provided for all major units of the 22-building medical center to produce comfort for the 2,700 patients and 800 staff members.

The coordinated system has been designed to respond automatically to changes in outdoor temperature and humidity with a minimum of manual attendance or maintenance, Milton Simkin, vice president, declared.

It was also engineered to handle every anticipated over-

load condition including a possible expansion of the transmission system.

Alex Kay, engineer for the company, reported that year-round air conditioning for the observation, operating, and plaster rooms not only provides comfortable temperatures, but dehumidifies the operating areas to prevent static electricity from discharging and igniting fumes released during anesthesia.

Central station equipment is situated in a penthouse compartment above the surgical suites. It can, when operating at full 25.9 tons capacity, meet the entire simultaneous load thrust upon it by rejecting more than 373,000 B.t.u./hr.

Individual humidity and temperature controls are provided for the plaster room. The obser-

vation room is coupled for humidity and temperature to the operating room.

Kay said that innumerable precautions were taken to prevent patients from tampering with exposed portions of heating conduit and radiators.

All conductors are recessed and protected behind plated steel grilles. Radiator valves located in patients' sections are of the lockshield type and do not extend through grille covers.

All protective screens and registers that could be accessible to inmates are attached with vandal-proof screws of the spanner head type which require a special tool for removal.

Exhaust air intakes are designed to prevent patients from maliciously jamming clothing or other foreign objects into them.

Meckstroth Takes Marketing Post At Westinghouse

STAUNTON, Va.—Donald R. Meckstroth has joined Westinghouse Electric Corp. as manager of marketing services for the company's air conditioning division here, it was announced recently by J. A. Gilbreath, division manager.

In this newly-created position, Meckstroth will direct and coordinate all internal sales service, including advertising and promotion, market research, sales training, and product service.

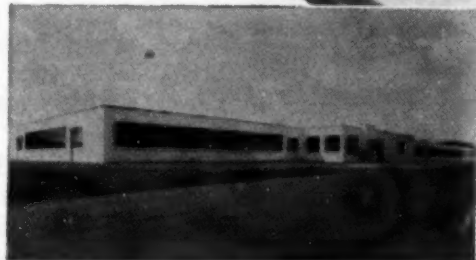
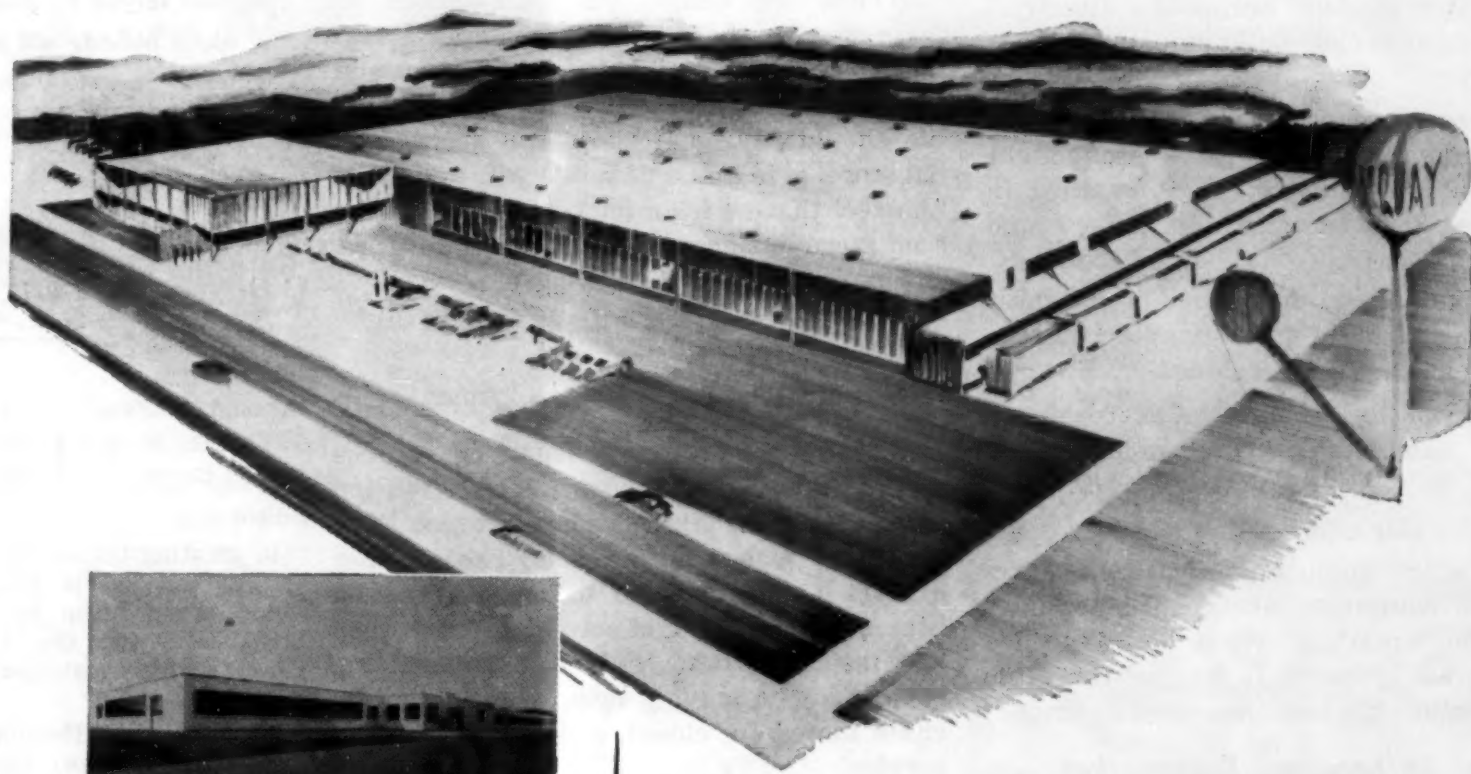
He was formerly associated with Servel, Inc.



Meckstroth

McQuay...

announces opening of its new plant in Grenada, Mississippi



Faribault Plant
4th St. and Park Ave.
Faribault, Minnesota



General Offices and Warehouse
1600 Broadway St. N.E.
Minneapolis, Minnesota

You're invited to attend our formal opening on October 3

In the 167,000 square feet of space in our new Grenada, Mississippi, plant we have installed the most up-to-date machinery and equipment known to the industry. A large part of McQuay's Heating, Air Conditioning, and Refrigeration Coils as well as unitary equipment will be made here.

These new facilities enable us to offer you faster, more efficient service in the manufacture and distribution of the high quality products for which the name McQuay is so well and favorably known throughout the country.

Mark it down on your calendar now, October 3, for a visit we know you'll find a pleasant and profitable experience. Dedication ceremonies will commence at 2:45 P.M.

Write McQuay Inc. for engineering assistance on any coil problem.

McQuay INC.



AIR CONDITIONING
REFRIGERATION
HEATING

1607 Broadway St. N. E., Minneapolis 13, Minnesota

For more information about products advertised on this page use Information Center, page 14.

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

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U. S. Patent
Office;
Est. 1926

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F. M. COCKRELL, Founder

'The Conscience of the Industry'

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VOLUME 76, No. 4, SERIAL NO. 1,384, SEPTEMBER 26, 1955

"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

**OFF THE CHEST**

Ahmed A. Fazelbhoj Limited
41, Marine Lines
Bombay 1, India

Editor:

In greeting friends near home and abroad, as in the past I would, again bring to them a THOUGHT—for the COMING YEAR—which may perhaps be intriguing.

Last year's "Thought" (reprinted on reverse) said about the CONSCIOUS SOUL and that its "evolutionary expressions" were caused by man's own "conscious living."

By chance I read a somewhat corroborating quotation from the UPANISHAD, the great scriptural writings of the ancients of this country. Says the UPANISHAD:

"IF MAN SEES ALL CREATURES IN HIMSELF AND HIMSELF IN ALL CREATURES, THERE WILL BE NO PROBLEM."

Science has discovered almost all known basic elements (about 78) of which this earth is composed—and scientists have found them also, all in man's body: hydrogen, oxygen, carbon, calcium, iron, copper, gold, silver, possibly uranium and cobalt. Man may therefore be a "world in himself."

And he may also have the "cells" as are expressed in all different forms of life in this world: birds, fishes, land animals, worms, and microbes—cells

of all created life. So it may be that he goes backwards and forwards in the form of the "cell" such as he "dominantly energizes" by the forces generated by his own "creative thinking and living"—for a higher or lower expression of life to be inherited.

The physical elements of his being go back to Mother Earth from whom they were borrowed, i.e., the iron, the gold, the cobalt, etc., but their spiritual "counterparts" may exist in his "spiritual" being ready to develop into "limitless" energy—his own PRICELESS POSSESSION.

For just as the scientist created the physical cyclotron or the reactor to fuse the physical atom to generate enormous forces of nuclear energy—by "conscious living" man may himself build his spiritual cyclotron to generate forces for a nobler or baser expression of his own self: THE INHERITANCE HEREAFTER.

Thus were born Confucius, Buddha, Plato, Shakespeare, Michelangelo, Tennyson, Caruso, Aurobindo, Gandhi, Churchill, Roosevelt, Stalin, and Hitler and the "Worms" and the "Woods" of life.

A FANCY may be—perhaps a FACT.

With best wishes in the new year for conscious living, I am,

AHMED FAZELBHOJ

They'll
Do It
Every
Time

by

Jimmy
Hatlo

**Plight of the Commercial Refrigeration Dealer**

Within recent memory a typical commercial refrigeration dealer enjoyed good business volume on a wide variety of specialized products. One by one, they have slipped away from him in recent years. Items:

(1) **Ice cream cabinets** are sold directly by manufacturers to dairy firms, which "rent" them (dollar a year, say) to ice cream purveyors.

(2) Water coolers are sold "directly," also—to commercial and industrial mass purchasers.

(3) Frozen foods (orange juice is a prime example) storage cases are bought by national distributors; then installed in food stores and serviced by those brand purveyors.

(4) Chain stores buy commercial cases in quantities straight from manufacturers—again by-passing the local dealer.

Following letter from a McCray dealer is typical of many we have received lately:

The Premier Refrigeration Co.
Baltimore 24, Md.

"From every angle manufacturers of refrigeration equipment are shouting 'Supermarket, Supermarket.' What has happened to the corner grocer? Is he the forgotten man? Does not his business count anymore?"

"He too is becoming Supermarket conscious, but in an entirely different way. Many are worried and afraid to oblige themselves to the cost of remodeling or even to the purchase of one or two new fixtures when they are constantly being told

that the housewife's shopping habits have changed—she wants wide aisles, rows of self-service cases, mass displays.

"Mr. Corner Grocer cannot give all this. He is a small businessman with limited space and limited capital. With all the hoopla he might wonder if he is fighting a losing battle—so why invest in a business that he is led to believe is dying?"

"There are many, many thousands of these grocers that could be rendered a real service if a sincere interest was shown and effort made towards solving their problems. We should rejuvenate both the grocer and his store, give him a new interest, and make him feel that he is an important part of the food store business, now and for the future, and not a member of a dying era."

H. W. GOODHART.

To which we can heartily an "Amen!"

Recently we were privileged to address and visit with the 1955 annual convention of the National Association of Retail Food and Meat Dealers in Cleveland. These corner grocers (often referred to as "Ma and Pa Stores") are alive and solvent because they are installing new equipment, advertising cooperatively, staying open when unionized chain stores are closed, and giving personal service.

Isn't that your answer, Mr. Goodhart? To increase your commercial refrigeration business, show independent food stores how they can increase their business—by serving neighborhood needs personally.

There is nothing so easy but that it becomes difficult when you do it with reluctance.—TERENCE.

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SLANTS on Service

Thermostat Shorts

When stapling thermostat wires to walls or basement ceilings, care must be taken not to cause a short in the wires by driving the insulated staples in too hard.

To avoid this, Fred Nolting suggests inserting the blade of a small, narrow screwdriver under the staple before giving it that last, light tap with the hammer.

'Locking' Setscrews

To prevent an Allen setscrew from coming loose after positive tightening, G. E. Knapp puts a bit of No. 2 non-hardening gasket compound on the threads of the setscrew. This problem sometimes appears with fans, couplings, and pulleys made of aluminum or white metal, which is softer than the steel used for setscrews.

Marsh Names Zurick Sales Representative

SKOKIE, Ill. — Thomas E. Zurick has been appointed sales representative for Marsh Instrument Co. in Kentucky and West Virginia.



T. E. Zurick

Zurick was employed by Fairbanks-Morse before joining the Marsh sales staff. He is a graduate of the University of Illinois.

Refrigeration Firm Destroyed by Fire

MONROE, La. — Fire recently destroyed the Walter Reed Refrigeration building here and caused many thousands of dollars in damage.

The company's stock of commercial refrigeration fixtures, electrical appliances, and television sets was destroyed, as were most records except accounts receivable. Being in the safe, these were spared, a company official said.

MANUFACTURERS' REPRESENTATIVES

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EXCLUSIVE sales territories now offered for first time Middle East — Northeast Southwest — Northwest Far West

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MT. VERNON, N. Y.

Crane Heads Market Research for Kinetic

WILMINGTON, Del. — Ralph A. Crane has been named market research manager of du Pont Co.'s Kinetic Chemicals Div.

He succeeds Joseph C. Hoopes who has been named manager of wholesale refrigerant sales.

Crane joined the company in 1940 as a construction engineer and served with the company's engineering department in Wilmington until July, 1949, when he was transferred to the Organic Chemicals Dept.

From 1952 until November, 1954, he was supervisor of the projects section of the Organic Chemicals Dept. and then returned to the Chambers Works as an engineer on special projects until March when he became supervisor of employment of technical personnel of the manufacturing division.

Reid Gets McQuay Field Sales Post

MINNEAPOLIS — McQuay, Inc. has appointed Bruce W. Reid as new direct factory sales

engineer for refrigeration products and air conditioning coils in Kansas, Missouri, Colorado, New Mexico, and southern Illinois, according to H. Blake Thomas, executive vice president.

Reid, whose headquarters will be Kansas City, Mo., has been in the refrigeration and air conditioning field since 1938. He was chief engineer of City Products Corp. of Chicago for five years, sales engineer for Shelby-Skipwith, Inc. four years, and sales engineer for Cherry-Burrell Corp. eight years.



B. W. Reid

Voltmeter Measures Resistance, Voltage In Any Equipment

PHILADELPHIA — Philco Corp. has announced introduction of a new vacuum tube voltmeter with an a.c. voltmeter, d.c. voltmeter, and ohmmeter in one compact, lightweight test instrument.

The new Philco model 6100 vacuum tube voltmeter accurately measures voltage and resistance in any type electrical equipment, reports James J. Shallow, general manager of the company's Accessory Div. It is designed particularly for use in service shops, engineering laboratories, and factory maintenance.

"Six voltmeter ranges are available which permit a.c. and d.c. voltage measurements up to 1,000 volts," it was stated. "Six resistance ranges give accurate

readings from 0.5 ohms to 1,000 megohms.

"The a.c. frequency range extends from 20 to 20,000 cycles per second. It is also available with an accessory high voltage probe, Part No. 425-0022, which permits measuring d.c. voltages to 30,000."

The voltmeter is in a steel case, weighs 5½ lbs., and is 8½ in. high, 5½ in. wide, and 4 in. deep. It is now available from Philco distributors nationally and carries a suggested dealer price of \$54.95.

Weathertron Dealer Named

BLOOMFIELD, N. J. — Appointment of The Horton Co., Hartford, Conn., as a retailer for the G-E Weathertron has been announced by the General Electric Co.'s Weathertron Dept.

The Horton Co. will distribute Weathertrons in the Hartford area. David E. Alton is president.

What to look for

... when you select automatic expansion valves

(1) Look for *fast*, accurate, easy field adjustment — immediate setting at proper operating pressure. (2) Look for easy installation — compact size that fits easily into hard-to-get-at places. (3) Look for moisture-proof caps to prevent head freeze-ups. (4) Demand a large area strainer that can be removed without breaking the inlet connection. In other words, insist on automatic expansion valves designed to make your job easier!

A-P Models 204C and 304C are the standard of the refrigeration industry for domestic and small commercial appliances because they *do all these jobs positively, dependably and economically.*

All these MUSTS and EXTRAS too—yours in A-P valves

- Exclusive calibrated adjustment scale (Model 204C) — Quick pressure adjustment . . . accurate setting speeds installation. No delay for system to settle down.
- Stainless steel springs — pre-tested for correct tension.
- Large-area brass screen — keeps valves cleaner longer.
- Metal cap sealed with rubber gasket — prevents moisture freeze-ups.
- All component parts — brass or stainless steel.
- Better performance — from domestic refrigerators, water coolers, drink dispensers, ice cream and drink dispensers, home freezers, ice-cubers, etc.



NEW! 6-page bulletin on A-P automatic expansion valves, also complete 20-page bulletin on A-P refrigeration valves, filters and driers. For your copies write:



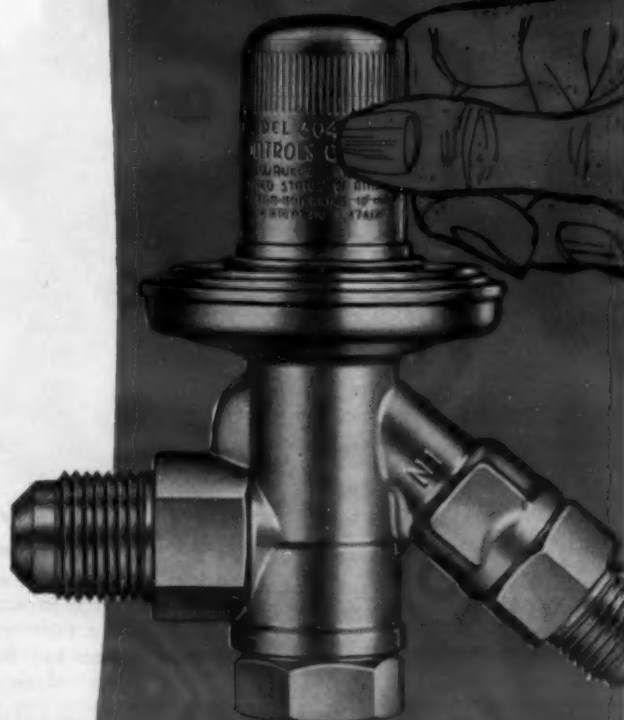
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MODEL 204C (standard) — Adjustment range: 15" vac. to 45 psig. Inlet: ½" SAE male flare. Capacity: ½-ton, F12. Outlet: ¼" female N.P.T. ½" x ¾" combination SAE male flare, straight ¾" SAE male flare. Model 204CH (bleed type) with slotted orifice eliminates heavy starting loads. Allows use of low starting-torque motors.



MODEL 304C (standard) — Two models, two adjustment ranges: 10" vac. to 45 psig. (Model 304CF) and 10" vac. to 75 psig. (Model 304CHF). Capacity: 1-ton F12 and F22. Inlet: ¾" x 1" combination SAE male flare. Outlet: ½" x ¾" combination SAE male flare. Also available with any size bleed slot.

What's New

Admiral Features 7.3-Cu. Ft. Refrigerator



—KEY NO. E-940—

CHICAGO—A 30-in. electric range listing for \$199.95 and a 7.3-cu. ft. automatic defrosting refrigerator listing for \$179.95 highlight new fall promotional models in Admiral Corp.'s appli-

ance line, it was announced recently by W. C. Johnson, vice president-sales.

The appliance specials also include a 9-cu. ft. refrigerator and two new freezers, a 14-ft. upright with 490 lbs. capacity, and a 17-ft. chest freezer with 590 lbs. capacity.

The range, model 3EH12, features an automatic timer, even oven heat distribution, and micro-tube surface units. Admiral's exclusive automatic basting and turning rotary roaster is optional for \$25.

The 7.3-cu. ft. refrigerator special, model DA-745, contains a butter keeper, three door shelves, full-width freezer chest and frozen storage drawer, and has a glacier tone interior.

The 9.2-cu. ft. refrigerator, model DA-960, which formerly listed for \$269.95, can be sold for as little as \$199.95, Johnson said. In addition to speedy automatic defrosting this model has three door shelves, full-width freezer chest, frozen storage drawer, full-width crisper, and butter keeper.

The 17-ft. chest freezer, 17C59, formerly listed at \$479.95 but will now be discounted from \$379.95, enabling dealers to offer a \$100 saving.

The 14-ft. upright freezer, 14U49, has five door shelves, a full-width roll-out basket on nylon glides, and is trimmed in tarnish-proof canyon copper. The dealer can offer a saving of \$180 from the former price since this model will list for \$299.95.



Ice Storage Bin Holds 925 Lbs.

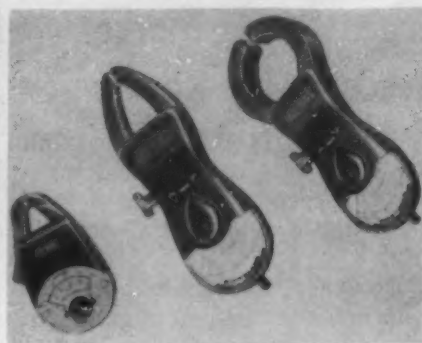
—KEY NO. E-942—

CHICAGO—An ice storage bin of 925-lb. capacity is now available from W. Mannhardt & Son here. It will accommodate one or two ice machines of most makes for cube or crushed ice or both.

This bin has two shovel doors for removal of large quantities of ice and top slanted sliding doors for supplementary requirements.

Constructed of stainless steel with back and bottom of aluminum, or all hammered aluminum exterior, the bin is insulated by 3-in. thick Fiberglas. The interior is made of either heavy-gauge stainless steel or rust resistant galvanized steel. A 1-in. threaded brass drain opens off the floor in center.

Chutes are furnished when needed. The bins, 6 ft. long by 2½ ft. wide and 4 ft. high with an additional 6 in. of pipe legs, are tested to support the weight of top mounting of ice machines plus ice content and bin weight.



3 Volt-Ammeters Complete Amprobe Line

—KEY NO. E-943—

LYNBROOK, N. Y.—Three new high-voltage Amprobe "Junior" snap-around volt-ammeters recently offered by Pyramid Instrument Corp. here now completes the line with a model available for every job, the company announced.

Models are available in 0-125/250-volt models in current ranges of 0-10, 0-25, 0-50, and 0-100 amperes a.c., and in 0-150/600-volt models in current ranges of 0-25, 0-50, or 0-100 amperes a.c.

Model 300 is best for general all-around work, the company stated, covering 6 to 300 amperes a.c. ranges and 3-volt meter ranges to 600 volts.

AmericanStandardOffers Air-Cooled Water Chiller

—KEY NO. E-944—

PITTSBURGH—A factory-assembled air-cooled water chiller which operates from a single piping system has been announced here by American Radiator & Standard Sanitary Corp.

Designated PAS-AC, the new chiller eliminates additional piping and separate water towers common to water-cooled chillers, the manufacturer stated.

Available in 2 and 3 hp. ratings, the PAS-AC chiller, operating in conjunction with Remotaire Room Conditioner, can provide a complete summer cooling system for residences and small commercial establishments.

Each chiller package is equipped with a water-cooling unit con-



sisting of an evaporator, a motor-compressor unit, and two large coil condensers for water-cooling efficiency. Two screen-covered openings provide air for condenser cooling. This process is accelerated by a fan-blower assembly which draws cool air through the condenser coils.

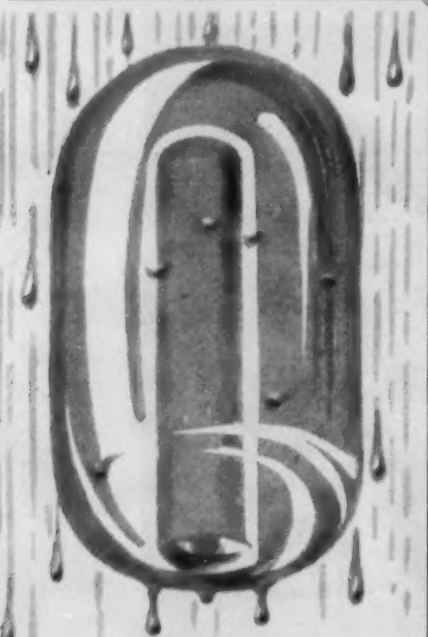


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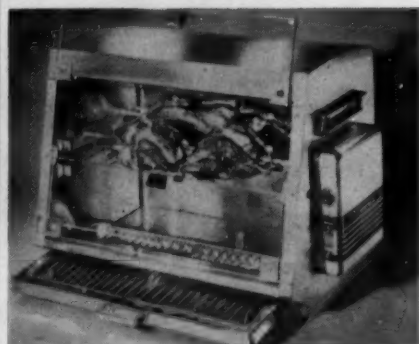
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Gentlemen: I'd like to sell the Ice Boy line. Please rush me complete information.

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Roto-Broil Introduces 6-Chicken Rotisserie



—KEY NO. E-941—

NEW YORK CITY—A rotisserie with a six-chicken capacity has been introduced by Roto-Broil Corp. of America here, it was announced.

Called the "Sun Valley," the manufacturer stated this is the largest rotisserie being sold for home use. It has two spits which can be used simultaneously, and which may be placed in three different positions. When only one spit is used, the unit will hold up to a 25-lb. turkey.

The Sun Valley has a large double-door glass spatter shield. Instant heat is provided by the Roto-Ray tubular heating element. The exact degree of temperature is "dialed" on an infinite heat selector.

Made entirely of stainless steel it is 23 in. wide by 16 in. deep and 18 in. high. It retails for \$139.95.

New MARCO TYPE Y5 SHADED POLE MOTOR

1/25 to 1/4 h.p.



- Higher Efficiency
- Better Stability
- Cooler Operation

LOW in COST

• This new, large diameter (5-1/2"), more powerful motor has all the features of the famous Marco Motors used in hundreds of thousands of air conditioning units—in fans, blowers and furnaces.

Power up to 1/4 h.p. can be supplied—or—in the new "wafer thin" design (as short as 2-1/2 inches) 1/15th horsepower.

Get the facts on this motor today!

Visit Booth No. 115, 9th Exposition—Air Conditioning and Refrigeration Industry—Atlantic City, Nov. 28-Dec. 1.

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Products Advertised

(list name, page, and issue date)

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Key No.	Key No.

(PLEASE PRINT PLAINLY)

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Company
Street
City Zone State
Type of Business

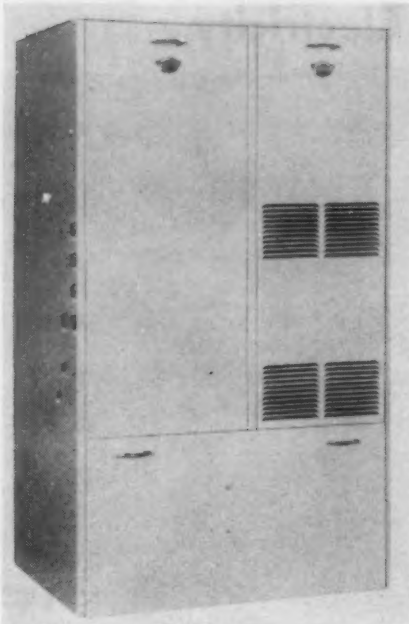
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DETROIT 26, MICHIGAN

Utility Introduces Forced Air Combinations



—KEY NO. E-945—

LOS ANGELES—Utility Appliance Corp. here announces the introduction of its new "Weather-amic" line of vertical, horizontal, and counterflow forced-air furnaces and heating-air conditioning combinations.

Stan Skafte, sales manager of Utility's Heating Div., reports the new line contains improved engineering features, modern cabinet styling, and distinctive two-tone coloring to further enhance sales appeal.

Skafte said the line "is all dressed up in Bank Note Green." There is a wide choice of models and sizes.

The new, enlarged "Sy-Lent Heat Exchanger" in the Weather-amic upflow and counterflow models features a flexible elbow to eliminate expansion and contraction noises, it was stated.

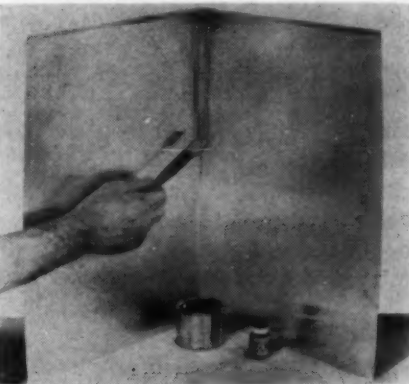
"Another noise eliminator are

the diaphragm-type control valves which do away with the on and off 'clicking' of the fuel supply valve," the announcement said.

Designed to reduce installation costs, prewiring at factory includes a 3-ft. connecting cord with NEMA standard 3-prong plug.

Another feature in some models of the line is the "Dy-Rekt Drive Blower." The improved resilient blower mounting on the Utility dynamically balanced blower wheel is claimed to provide quiet operation.

"The variable speed control assures a complete range of air flow to meet every installation requirement," the company said. "Other models in the line use patented Utility belt-driven blowers with improved resilient mounting to eliminate blower noise."



Smooth-On Develops Non-Shrink Putty

—KEY NO. E-946—

JERSEY CITY, N. J.—A versatile aluminum putty, which shrinks less than 2/10ths of 1% while hardening and will not crack in thick applications, is now available from Smooth-On Mfg. Co. here, the manufacturer announced.

Known as "Metalset A201," the putty can be used to build up metal surfaces or for caulking seams and holes in metal and wood. It is easy to mix with its curing agent, the manufacturer said, and has the needed thixotropy for simple hand tool application to vertical and overhead surfaces.

Metalset A201 hardens to metallic density at room temperature. It can be machined by any conventional method, can be tapped or drilled, and is not affected by water and resists acids and alkalis. When machined, the color approaches that of cast aluminum.

Filler materials are completely suspended in the putty, which is epoxy resin compounded of aluminum and other ingredients to form a paste.

Johns-Manville Offers New Flush Clip

—KEY NO. E-947—

NEW YORK CITY—Johns-Manville has introduced a new development called the "Graham Flush Clip" for use with



impaired insulation. This clip fits over the pin which is welded to the metal duct.

"When pushed home, the clip is flush with the insulation and assures a smooth, unbroken surface on the exterior of air conditioning duct insulation," the company said. "There are no sharp projections. The flush clip safeguards personnel. It won't puncture a vapor barrier."

"The Johns-Manville Industrial Contract Dept. has worked closely with Graham Mfg. Corp. in field testing the Graham Flush Clip on industrial installations."

American Blower Has New Central-Station Line

—KEY NO. E-948—

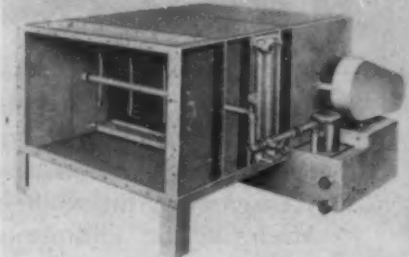
DETROIT—A new line of complete central-station, cabinet-type air conditioning units for industrial and commercial applications is now available from American Blower Corp. here.

Main features of the line include compactness, simple installation, design flexibility, and a wide capacity range in all types from 600 to 48,000 c.f.m., according to the company.

Three basic types of units are included in the new line: (1) air conditioning units, (2) sprayed coil conditioner units, and (3) multi-zone conditioner units.

The air conditioning and sprayed coil conditioning units are available as either horizontal or space-saving vertical arrangements, both with horizontal air flow through the cooling coils. Multi-zone conditioner units are made in one arrangement for either horizontal or vertical air flow.

"All units have large volume,



slow speed, air circulating fans," the company said. "Cooling and dehumidifying can be done with chilled water, direct expanded refrigerant or brines. Heating is accomplished with steam or hot water."

"Separate sections are provided for all accessories including heating, cooling, filtering, and by-passing. A short drain pan is under the fan and coil sections only and does not extend the full width of the units."

"New high face velocity, smooth fin coils cut the physical size requirements of the heating and cooling coil sections."

MAKE IT A HEAT-X FAMILY AFFAIR FOR YOUR REFRIGERATING JOBS



Protect your good relations (customer relations, that is!) with products from the Heat-X family tree. Specify Heat-X air conditioning and refrigeration products—soundly engineered to enhance your good name.

SHELL AND COIL CONDENSER RECEIVERS—Cooling coils of copper tubing. Shell of seamless steel tubing. ½ to 5 H.P.

WATER CHILLERS—Copper Inner-Fins in refrigerant passages. Water passages of non-ferrous construction. Single pass. 2 to 90 Tons.

CLEANABLE INNER-FIN CONDENSERS—Inner-Fins in refrigerant tubes for minimum size and maximum heat transfer. Cleanable tubes. ½ to 15 H.P.

HEAT INTERCHANGERS—Inner-Fin construction. No oil trapping problem. Low Freon charge required. 7½ to 100 Tons.

SHELL AND TUBE CONDENSERS—Copper Inner-Fins in refrigerant passages. All water passages of non-ferrous construction. 5 to 150 Tons.

CAST ALUMINUM HEAT INTERCHANGERS—Inner-Fin construction. No internal joints. Suction line and liquid line are separate tubes. ¼ to 10 Tons.

CAST ALUMINUM LIQUID COOLERS—Separate refrigerant and water circuits cast within aluminum block. No freeze-up damage.

Request complete descriptive bulletins on these and other Heat-X products.

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The LAS VEGAS Story: Heat Pumps Gain Favor In City with Ideal Water and Air, Cheap Electricity

This is the fourth and final article in the series "The Las Vegas Story." The series has related some of the developments and applications of refrigeration and air conditioning equipment in the fast-growing, high-rolling oasis in the Nevada wastelands.

Much of the information was picked up by Editorial Director Phil Redeker in the time that he could spare while he was attending the Atomic Open Shot Tests earlier this year. Thus it is not a complete survey of all the factors involved in the industry there, but rather a discussion of some of the unusual phases.

This final article discusses the progress that "heat pump" air conditioning is making in the Las Vegas area.

By Phil B. Redeker

LAS VEGAS, Nev.—The heat pump is taking hold in convincing fashion in this community which claims to have more air conditioning per capita than any other in the world—and there's some pretty good reasons why.

Summed up, these are:

1. Water and air conditions. There is an ample supply of water, generally in the temperature range of 60 to 70° F. The outdoor air temperature rarely falls below 32° F. Thus, two of the principal elements used as "heat sources" for heat pump systems are available under almost ideal conditions.

2. Cost of electricity is low, so operating costs for the all-electric heat pump system are low. Moreover, Las Vegas costs of various types of fuel for heating systems are relatively high, thus making the operating

cost of a heat pump system look particularly attractive. Also, "electric heating" systems are greatly restricted in use in Las Vegas by code, so that there is little competition from that source.

Basementless Construction Favors Heat Pump

3. Most of the construction in Las Vegas is of the basementless type, and space for any type of equipment, utilities, etc., is hard to come by. The heat pump, by its design an inherently compact year-round system, is attractive from this standpoint.

A dealer who has seized upon the heat pump opportunities and who hasn't any doubt about its growth possibilities is R. H. "Jeff" Jefferson of J & M Refrigeration Co., who handles the Typhoon "Prop-R-Temp"

line of heat pumps. Says "Jeff,"

"I don't see how any other kind of a system can touch the heat pump—and do a comparable job of heating and cooling—in either first cost or operating cost with the conditions that we have in Las Vegas."

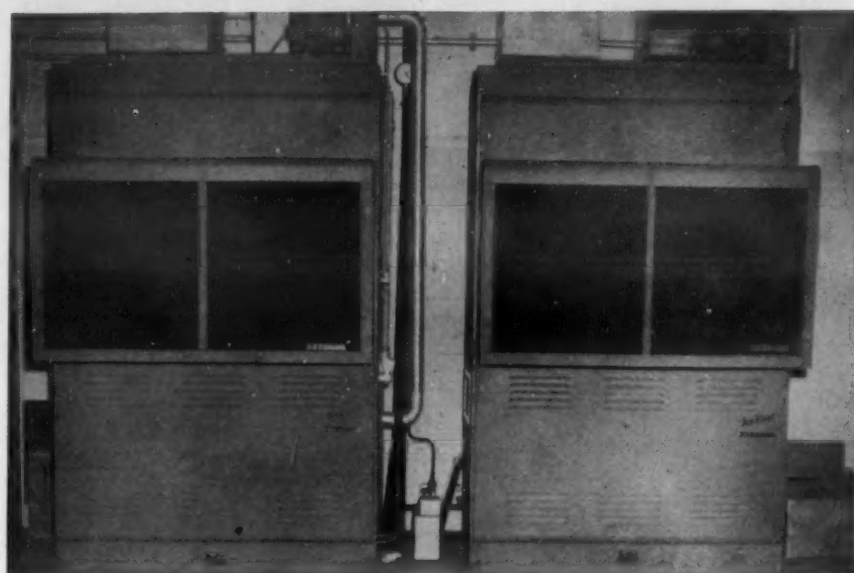
"In some installations, I believe that operating cost for heat pumps in homes here will average not much more than \$5 a month over a 12 months' period."

"We've got an 1,800-sq. ft. all-electric model home here, complete with heat pump, where the total electric bill doesn't run over \$15 a month."

On some of the bigger jobs, say from 10 to 50 hp., "Jeff" thinks he can lick some of the other types of systems on first costs because there would be no need for heating boilers, water conservation devices, and the extensive piping that such jobs need.

One step that this Typhoon dealer has found important in getting the greatest efficiency out of these water-to-air systems is to use the water first to pre-cool the air. 100% fresh air is used in all the installations.

However, this imposes no extra load, as the water will cool the fresh air down to, in some cases, within 4° of the desired entering air system. Therefore, the system can be designed and



THE TWO 20-TON TYPHOON HEAT PUMPS above are installed in the office of the Las Vegas Review Journal. Actually, there have been far more installations of this nature in residences than in commercial establishments in the Las Vegas area.

sized just like a complete recirculating system.

It has been found that for best results in the water pre-cooling setup, an 8-row coil must be used.

Liming, Scaling Problem Minimized

Since run-off water (surface water) is used for the heat pump jobs, and is not re-used, there is not the problem in liming or scaling that is found in some of the other types of cooling systems in the Las Vegas areas, "Jeff" declares.

The basementless construction of the homes offers some problems in running ductwork. In most instances, ducts will be furred in down hallways. Some perimeter systems are being installed this year. Most air outlets are placed high on walls or in the ceilings.

How good will the market for the heat pump be this year—and in succeeding years? Well, "Jeff" is shooting for 50 residential heat pump installations of his own this year and thinks he has a good chance of making it. He has a 40-ton system

in the Las Vegas Review Journal, one of the local newspaper offices.

Also, the local electric power company, which has had so many problems with the growth of the community that it hasn't had much opportunity to promote the heat pump, is installing a 30-ton system for its offices, and this might give some impetus to a possible promotion program.

On the subject of possibilities for heat pump applications in the Far West and Southwest, Arden Krell, district manager for Typhoon, says:

"There are many arid areas in the West where sub-surface water is readily available at an even temperature. These areas are subject to extreme temperatures in the summer and relatively mild winters, and are therefore ideal heat pump areas. A good example is in the Mojave Desert where 65° F. water is sometimes found just 6 ft. below the surface."

"In none of the installations we have made in this area have we found it necessary to install any supplementary source of heat."



For clean, dry, trouble-free systems, install

DFN DRIERS—FILTERS STRAINERS

Most complete line on the market! Every type, size, need.

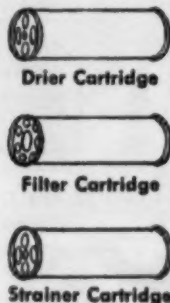
DEMOUNTABLE (Cartridge Type) DRIERS

1 to 100 Tons Capacity
Heavy forged brass tongue and groove flanges.
Easily serviced—only 6 bronze cap screws

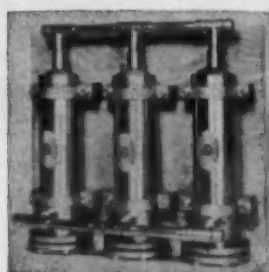


Straight thru and Angle Types

Use same shell 3 ways
by interchanging cartridges according to the needs of the system, as shown.



See DFN Selection Chart.



NEW!

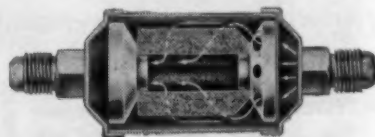
Manifold
Angle Shells
—mounted on
wood panel
—ready to install.

FACTORY-SEALED FILTER-DRIERS



Factory charged and sealed for permanent installation. Choice of desiccants, PERMAGRAN—Silica Gel—Activated Alumina.

PERMACLEAN FILTERS



Designed for heavy-duty service. Exclusive Permaclean filtering element provides large, effective surface, plus depth filtration to take out sludge, flux and particles down to 1 micron. Factory-sealed and demountable types.

FULL LINE OF STRAINERS



Factory-sealed Demountable—Angle Type Pencil Type Demountable—"Y" Type

DFN ACCESSORIES
Charging hose and couplers • Hose for Pull-out Compartments • Vibration Absorbers • Water Regulating Valves • Water Bubbler • Water Glass Filters



GET OUR NEW CATALOG! Ask your wholesaler—or write us.

THE MCINTIRE COMPANY • Livingston 11, N.J.

DRIERS • FILTERS • STRAINERS

20-Year Guarantee!

ON THE
WETTED
DECK
SURFACE



HALSTEAD
& MITCHELL
COOLING
TOWERS

2 to
100 tons

"Built like a Battleship"—economical, lastworthy. Pressure-treated wood in wetted deck surface guarantees against rotting or fungi growth. Stainless steel fan and shaft, plus individual cabinet coatings of Vinsynite, Vinyl Aluminum and chlorinated rubber, add important years of life. Wholesalers in Principal Cities

Halstead & Mitchell

BESSEMER BLDG. PITTSBURGH 22, PA.

Sutton To Sell Residential Systems Through Appliance Stores

WICHITA, Kan.—A new merchandising program designed to sell Vornado's low cost central system air conditioners through retail appliance stores was revealed at a recent sales meeting held by the O. A. Sutton Corp. here.

Sutton officials cited two basic reasons for their sales program through the retail appliance dealers.

"First, central air conditioning is recognized by most authorities as offering the greatest potential appliance volume of any new product evolved from post war activity," according to West Brient, sales manager of the Commercial Products Div. of the company, "however, present sales sources have not been able to properly serve the tremendous consumer demand.

"Second, the merchandising and advertising experience of average appliance dealer logically fits central air conditioning into his sales activities. There has not been a problem of creating a market for central air conditioning," Brient said; "the problem has been to develop a unit specifically designed for the home market, that was low priced, completely packaged, easily installed, and could be handled by an appliance dealer with his existing organization."

Vornado's plan calls for an initial campaign to establish basic selected dealerships. Distributors will contact appliance dealers and explain Vornado's special floor demonstrator plan. It is designed to get sample units on dealer display floors and sell from them year round. Special purchase incentive programs for dealer salesmen to install units in their homes and a complete well rounded training program for dealer salesmen has been designed to establish groundwork for appliance store sales.

Lima Register Co. Offers Sound Movie On Air Diffusion

LIMA, Ohio—A new color 16-mm. sound movie on air diffusion has been produced by The Lima Register Co. here and is now available for showings, it was announced by Henry Pataky, who is general sales manager.

The movie is entitled "The Case of the Diffused Dealer" and tells the story of a heating dealer's wife who hires a private detective to get the facts about a new heating installation which is worrying her husband.

In getting the facts needed to solve the problem installation, the detective and the heating dealer learn about the advantages of good design, engineering, and construction in diffusers, and see actual laboratory smoke tests being run on Lima floor, extended baseboard, wall, and ceiling diffusers.

Heating and air conditioning dealers and distributors may reserve a date for showing of this 23-minute movie by writing to the company.



A 3½-hp. "VORNADO" central residential air conditioner recently began rolling off production lines of The O. A. Sutton Corp. Earlier this year a 2-hp. unit of the same type was introduced. New, compact design and low first and installation costs are claimed for these models. Dan Mull (left), vice president in charge of engineering, and Joe Dolland (right), vice president in charge of manufacturing, look over some of the 3½-hp. units.

Cartwright Named Women Find Novel Ways To Use Conditioning

WICHITA, Kan.—Wilson C. Cartwright, national accounts sales manager of the Coleman Co., Inc., has been appointed manager of the Coleman Los Angeles branch, it was announced by Carl L. Burrows, sales vice president.

Cartwright succeeds Lawrence R. Carney, manager since 1951 of the Los Angeles sales office. Carney has become regional sales manager for the Pacific Northwest and northern Rocky Mountain states.

As manager in Los Angeles, Cartwright will direct sales and service with Coleman dealers in southern California and Arizona.

A. A. Courtney, former sales manager for New England, succeeds Cartwright as national accounts sales manager.

DETROIT — Women have found new ways in which life is made easier by air conditioning, according to reports found in the public press.

A cool atmosphere is just one of the benefits modern women get from it.

A woman in Philadelphia paints small objects and furniture in an air conditioned room because there is little dust to settle on the paint and the paint odor disappears from the room faster.

In Farmingdale, N. J., a woman cools her pies in an air conditioned room where flies can't get at them.

Several women have found that holding their hands in front of the conditioner after a manicure dries the polish quicker.

for TOP Efficiency in a small package...



ACTUAL SIZE
NO. 777 THERMOSTATIC
EXPANSION VALVE

Specify DETROIT CONTROLS 777 Space Saver Expansion Valves

SIZE

Only 2¾" high! Connections: Inlet, ¼ and ⅜ S.A.E. (interchangeable); outlet, ½ S.A.E. and ¼ F.P.T. Capillary tube 60 inches. Large inlet strainer can be cleaned on the job. Superheat adjustment easily accessible.

CAPACITY

777: ⅛ to 2 tons F-12, 1 to 3½ tons F-22. 777-E, with external equalizer: 1 to 3 tons F-12, 1 to 5 tons F-22. Conversion of 777-E from external to internal equalizer quickly and easily made on the job.

CONSTRUCTION

Rugged as it is compact! Large standard wrench flats, polished flare faces, anchored capillary and ball-type needle and seat assembly add to the performance characteristics at every step!

APPLICATION

The 777 has a very broad range of uses. In addition to the standard liquid charged valves, 777 is available with C or Z cross charges where motor protection is needed. It can be mounted in any position. Models are available with pressure limiting, internal or external equalizers.

For more profits... more customer satisfaction...
USE, SELL, INSTALL DETROIT CONTROLS 777 "Space Saver".

DETROIT CONTROLS CORPORATION
5900 TRUMBULL AVE. • DETROIT 8, MICHIGAN
Division of AMERICAN RADIATOR & STANDARD SANITARY Corporation



Representatives in Principal Cities • Canadian Representatives:
RAILWAY AND ENGINEERING SPECIALTIES, LTD.,
Montreal, Toronto, Winnipeg.



AUTOMATIC CONTROLS for REFRIGERATION

AIR CONDITIONING • DOMESTIC HEATING • AVIATION • TRANSPORTATION • HOME APPLIANCES • INDUSTRIAL USES

For more information about products advertised on this page use Information Center, page 14.

Refrigeration Problems And Their Solution

By Paul Reed

For Service and Installation Engineers



Propane in Low-Temp Equipment

The following question was received from a reader in a foreign country, and the answer to it may be of interest to our readers in other countries and to readers here in the United States.

QUESTION

Due to transportation costs, import duties, and difficulty in getting import licenses, it is practically impossible for us to

get some of the refrigerants that are in common use in the United States. We are limited to ammonia, methyl chloride, and sulphur dioxide, which are either produced in this country or can be obtained from countries from which we can import more easily than from the United States.

I formerly lived in Chicago, and at first I missed "Freon" terribly. However, I have used methyl chloride as a substitute for the ordinary temperatures used in household refrigerators and commercial equipment used in stores and restaurants.

Lately, I am doing more and

more low temperature work in ice-cream cabinets and some freezers, involving temperatures of about -17° C. to -23° C. These require evaporator temperatures of around -29° C. to -35° C.

For these temperatures, we have to operate at suction pressures under atmospheric pressure. I do not like to operate on a vacuum, so I have been giving some thought to the possibility of using propane instead of methyl chloride, in these low temperature jobs.

I have a pressure-temperature table for propane, but no information on its displacement nor on how much refrigeration it will produce per horsepower.

The propane available here will produce about 2,270 calories per Kg as a fuel gas. Does that mean it will produce that much refrigeration if used as a refrigerant? Please send me some information on propane, and

also tell me what you think of using propane.

ANSWER

Propane would be a very suitable refrigerant for temperatures you mention, except for one characteristic, which will be covered later. At atmospheric pressure, it boils at -48° C. (-44° F.), just a little below "Freon-22" or "Genetron-141." Therefore, even for the lowest temperature evaporator that you mention, -35° C. (-31° F.), you would still be operating at well above atmospheric pressure—at 2.4 p.s.i.g. (.17 kg. per sq. cm.) The head pressures are a little lower than for "Freon-22" at the same condensing temperatures.

NON-CORROSIVE AND NON-ACID

Since propane, like butane and the other fuel gases, is composed entirely of carbon and hydrogen, it is non-corrosive,

and there is much less likelihood of acids and sludges than with the halogenated hydrocarbons—the "Freons," "Genetrons," methyl chloride, etc.

On the other hand, propane absorbs even less water than "Freon-12" or "Genetron-12," and far less than "Freon-22," "Genetron-141," or methyl chloride. Therefore, a low temperature system using propane would have to be quite dry, at least as dry as in the case of "Freon-12" or "Genetron-12."

LOW DISPLACEMENT

The compressor displacement (at standard ton conditions of -15° C. (5° F.) evaporating and 30° C. (86° F.) condensing) is about 10% greater for propane than for "Freon-22," so you would have to use a little larger compressor for propane than for "Freon-22."

As compared to "Freon-12," the compressor displacement (also at standard ton conditions) would be less—about five eighths as much in fact. The compressor displacement for propane is still less compared to methyl chloride; the compressor for propane would have to be only .6 as large as for methyl chloride.

HP/TON OK

The horsepower per ton is about the same for all four of the refrigerants mentioned: 1.030 for propane, 1.011 for "Freon-22," 1.002 for "Freon-12," and .962 for methyl chloride, not enough difference to be of consequence one way or the other.

BUT FLAMMABLE AND EXPLOSIVE—

So far, propane sounds fine for your use. But there is one bad disadvantage—bad enough in fact to entirely outweigh all of its advantages. Propane is highly flammable and explosive.

Propane has been used, and in fact is still being used in some places, despite its flammability and explosiveness; in some industrial applications where other explosive materials are present, and where special care and precautions are taken, and where there is trained and well-equipped maintenance personnel.

NO ODORS—HARD TO FIND LEAKS

Propane has almost no odor, and explosive concentrations of propane could be present in a room without being particularly noticeable. In addition, leaks of propane cannot be detected by a halide leak detector, which would be too dangerous around propane anyway.

TOO DANGEROUS FOR PUBLIC USE

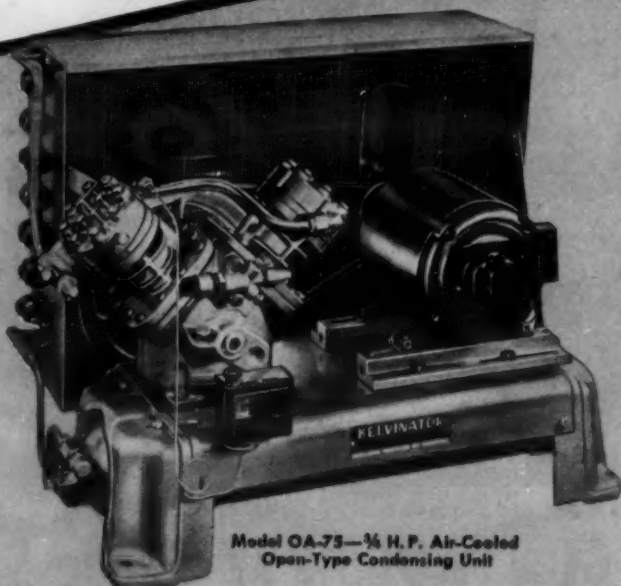
So, for a small automatic system in the ordinary market, delicatessen, confectionery, or other store or public place, propane would be too hazardous. Even though government regulations might not prohibit its use, you would not be justified in taking a chance.

PURE GRADE AVAILABLE?

Another point that you would have to take into consideration is the purity of the available propane. The propane that is usually available as a fuel gas is not straight propane and is

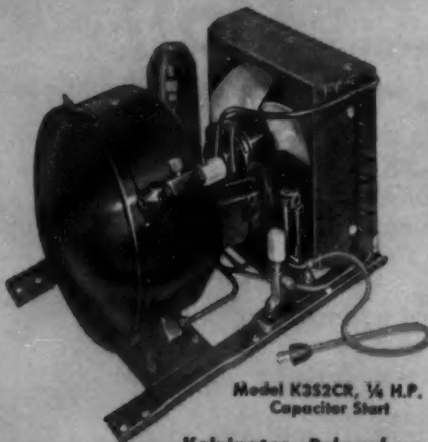
(Concluded on next page)

Get ALL the EXTRAS at NO EXTRA COST Get Kelvinator Open-Type Condensing Units



Model OA-75—1/4 H.P. Air-Cooled Open-Type Condensing Unit

Kelvinator offers a precision built line of open-type units famous for dependable performance and trouble-free service, yet they are priced realistically, let you meet any competition. A complete line of air-cooled, water-cooled, combination air- and water-cooled, and truck type from 1/4 H.P. air-cooled through 5 H.P. water-cooled.



Model K352CR, 1/4 H.P. Capacitor Start

Kelvinator Polarsphere Internally Mounted, Hermetically Sealed, Condensing Units. A complete line from 1/5 H.P. through 1/2 H.P. for a wide range of applications.



Packaged For Profits! Kelvinator Sealed Compressors. Complete packaged compressors for household and commercial cabinet replacement now available from Kelvinator, for the first time. (Model DK 352C 1/4 H.P. capacitor start, illustrated.) High capacity, competitively priced compressors. 10 models. 1/4 H.P. through 1/2 H.P.

EXTRA LARGE!
Air-Cooled
Condensers

EXTRA LARGE!
Receivers

EXTRA CAPACITY!
Water-Cooled
Condensers

EXTRA!
Heavy-Duty
Construction

EXTRA!
Easy-to-Service

NO EXTRA INVENTORY
COSTS! \$25. will cover your
parts investment for all
models in seals, valve plates,
gaskets, etc.!

SEE YOUR REFRIGERATION WHOLESALE OR MAIL THIS COUPON

Commercial Dept., Kelvinator Division
American Motors Corporation, Dept. AC-9B
14250 Plymouth Road, Detroit 32, Michigan

I am interested in more information about

☐ Open-type condensing units.
☐ Sealed Compressors. ☐ Sealed-type condensing units.

Name Title

Company

Street Address

City Zone State

When your business depends on cold you can depend on

Kelvinator

Specialists in Refrigeration Since 1914

Propane--

(Concluded from preceding page)
apt to contain some of the other hydrocarbons, particularly butane, which would of course, affect the temperatures, pressures, etc.

Also the fuel grade of propane is not apt to be dry, and you would have to pass it through generous sized driers before it would be suitable for use as a refrigerant in a low temperature system.

In the United States, a refrigerant grade of propane is available. It is more highly refined, and contains a very minimum of the other hydrocarbons, and is specially dried for use as a refrigerant.

Methyl chloride is, as you have probably found out, one of the best of the refrigerants, so it is advisable for you to continue to use it. It is true, that for evaporator temperatures below -23.5°C . (-10°F .) it is necessary to operate on a vacuum, but if you are careful to avoid leaks, you should have very little trouble.

HEAT OF COMBUSTION

Now for your question about the refrigerating effect of propane. The figure that you quoted, 2,270 kg. cal per kilogram (19,860 B.t.u. per lb.), is the heat of combustion. When propane, butane, or other hydrocarbon gas is burned, the gas changes chemically.

It combines with the oxygen in the air to form entirely different materials, mostly water and carbon dioxide. It is not a "reversible process," that is, these compounds, if put back together, would not form propane and air.

It would be wonderful if we could do this, for it would require large amounts of heat. Thus we would be producing refrigeration directly, instead of the indirect and clumsy methods that we now use.

NET REFRIGERATING EFFECT

In a mechanical refrigerating cycle, the refrigerant does not change chemically. It changes "state" only; from a liquid to a gas in the evaporator and back to a liquid in the condenser after its pressure is raised in the compressor.

Under standard ton conditions, the "net refrigerating effect" of one pound of propane is 13.83 kg. cal per kg. (121 B.t.u. per pound) of propane circulated. This compares to 5.84 kg. cal per kg. (51.1 B.t.u. per pound) for "Freon-12" or "Genetron-12," 7.92 kg. cal per kg. (69.3 B.t.u. per pound) for "Freon-22" or "Genetron-141," and 17.16 kg. cal per kg. (150.2 B.t.u. per pound) for methyl chloride.

'Do It Yourself' Furnace Ad Gets Immediate Results Crane Pushes Heating with Sales Contest

New Lower Price!

Paul Garthe's Sensational Summer Offer

INSTALL YOUR OWN FURNACE!

"DO IT YOURSELF"

NOW for a limited time only we offer you

DELCO-HEAT CONDITIONAIR

MODEL OBC-75-H (75,000 BTU-HR. OUTPUT)

For Only \$265

Complete with Fan, Filters, and Controls

FREE Engineering and Layout (One Shuffled or Natural) And Oil Furnaces Available in All States. We Can Furnish Material for Complete Installation.

General Motors

Delco-Heat

CONVERSION BURNER

\$149.50

Complete With AD "Do-It-Yourself" Controls

LOW DOWN PAYMENT

EASY CASH TERMS

WEST BAY SHORE ROAD

HOME HEATING IS EASY...

WITH A GAS-BURNING DELCO-HEAT CONDITIONAIR

We Also Will Completely Install Your Furnace if You Desire

GET OUR ESTIMATE TODAY!

We Have the Right Size Furnace for Your Home

PAUL GARTHE

REFRIGERATION & APPLIANCES, Inc.

Open Monday Through Friday 'Til 9 P.M.

PHONE 1451

UNUSUAL MERCHANDISING techniques are being used by Paul Garthe, Inc. for making a big splash in the furnace business. The appeal in this ad capitalizes on the current "Do-It-Yourself" fad, but also pointed out the fact that the firm would handle the complete installation for customers who preferred it this way.

TRAVERSE CITY, Mich.—Applying merchandising techniques learned through years of experience in the appliance and refrigeration field, Paul Garthe, Inc., here has made a big splash in the furnace business.

Capitalizing on the current national fad, Garthe recently offered a "Do It Yourself" furnace, and this appeal brought immediate response from customers.

A large advertisement in the local daily newspaper urged prospects: "Install your own furnace!"

Product spotlighted was a Delco-Heat "Conditionair" Model OBC-75-H, which is a 75,000 B.t.u. oil burning furnace (also available for gas). Suggested for a house of five to six rooms, the furnace was offered "complete with fan, filters, all controls."

Advertised price was \$265. Although this was somewhat below list, "it still represented a good profit for us," commented John Delanty, Garthe sales manager.

In addition, Garthe offered to provide "free engineering and

layout," and pointed out that "we can furnish material for complete installation."

Of course, as the ad mentioned, Garthe would handle the complete installation if the customer desired.

Day after the ad appeared, six furnaces were sold, five on the "do it yourself" basis and one an installed job. Sales of this particular model and larger furnaces have continued at a brisk pace since then. In fact, Delanty says, three days after the ad appeared, Garthe ordered a dozen more furnaces of the same model.

A couple more follow-up ads will appear shortly, Delanty added.

"You don't really get the full benefit of the initial big ad until you run smaller follow-up ads," he's convinced.

Actually the Garthe organization, which represents Frigidaire and Tyler in the refrigeration and air conditioning fields, has had the Delco furnace franchise for quite some time, but its heating activities had been pretty limited up to now.

"This 'do it yourself' ad put

us in the furnace business more than ever before," Delanty says.

Questioned about the legal aspects of a householder installing his own furnace, Delanty pointed out that as long as the installation meets requirements of the city code, the owner of a home has a perfect right to do this installing within Traverse City.

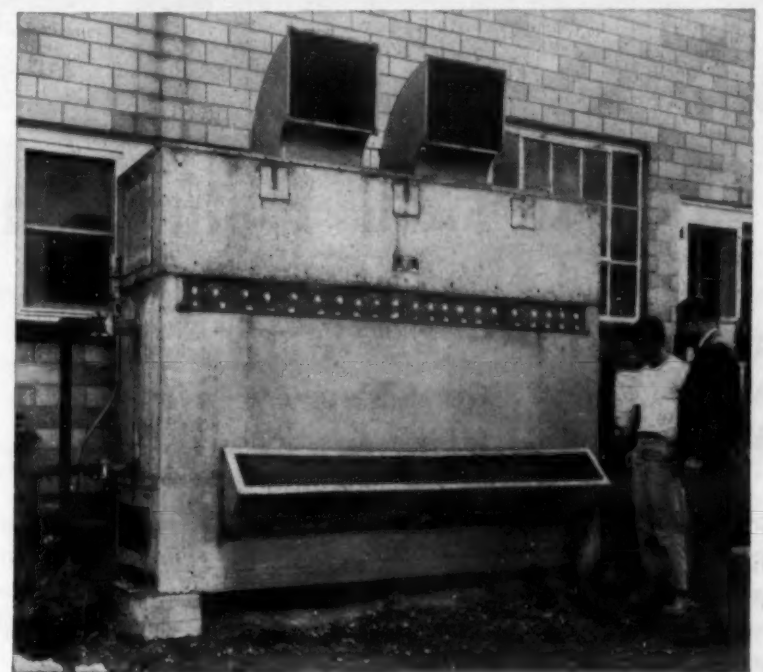
"And in the rural areas outside the city, there isn't any code problem to speak of. Naturally, though, just for our own protection, we intend to see that the furnaces are installed to give safe and efficient heating."

"However, for years quite a number of people in this area have been installing their own heating plants, so this is not a new problem," suggested Delanty.

CHICAGO—The latest move toward continuing Crane's heating expansion is a national contest among its heating sales force in which 856 tickets to college football games will be awarded Crane men during October and November.

To the top men in each of the company's eight sales districts will go pairs of tickets and expense money to New Year's Day bowl games.

Salesmen will earn points by lining up new dealers, selling furnaces and boilers for display, selling baseboard displays, store signs, job signs, truck and window decals, direct mail programs, cooperative newspaper advertising, and classified telephone directory listings.



Operate Your Evaporative Condensers This Better Way

FRICK evaporative condensers with super-saving water-air control attachments automatically cut over-all plant operating costs.

If you want to save water, save power, and save labor; if you must avoid freeze-ups in winter, and bothersome changes in head pressure the year 'round; if your refrigerating plant runs at times without an engineer—then you need the Frick-Mollenberg automatic condenser super-saving control.

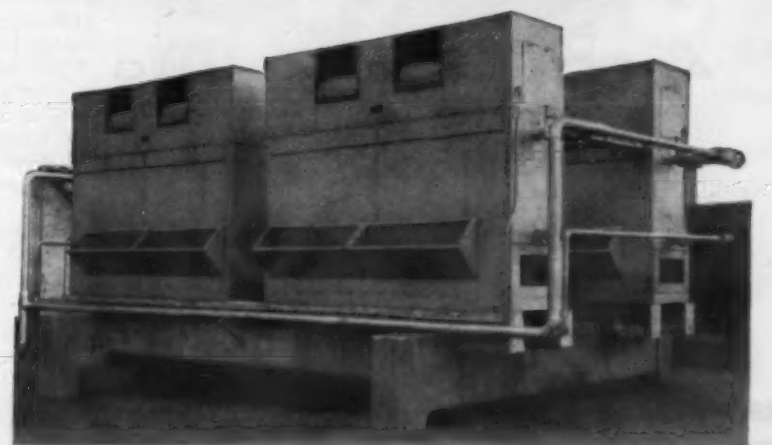
This patented system shuts off the water, and later the fan, when not required. It utilizes water from the compressor jackets. It handles overloads, or pump failure, with fresh water. Water lines are drained in cold weather. Flooding or starving of coolers and coils from fluctuating feed pressures are stopped. These and other advantages are performed automatically, saving time and labor.

Only Frick Company is licensed to furnish these valuable features. Before buying any evaporative condenser, ask how this super-saving control can reduce operating expenses in YOUR plant. The Waynesboro, Penna., Office or a nearby Frick Branch Office will give you detailed information without obligation. Write, wire or phone

DEPENDABLE REFRIGERATION SINCE 1882

Frick Co.

WAYNESBORO, PENNA. U.S.A.



These condensers are among many in Buffalo equipped with Frick-Mollenberg super-saving control.

Harry Alter's Newest **DEPENDABOOK** No. 163

Over 10,000 (count 'em!) items, shown and priced:

REFRIGERATION PARTS and Supplies

Also Electric Motors and Parts and Air Conditioning

WHOLESALE ONLY

Write for your copy and save money

The HARRY ALTER CO., Inc.

1728 S. Michigan Ave., Chicago 16, Illinois
134 Lafayette Street, New York 13, N. Y.
122 Parkhouse Street, Dallas 7, Texas

"Harry Alter gives you snappy service!"



Mr. Heating Contractor:

Get a solid footing on big air conditioning sales and profits!

Air Conditioning & Refrigeration News Now Offers You Helpful New Air Conditioning Books

IT'S GOOD PRACTICE to know as much as possible about the business we're in, and to stay abreast of current developments in the field. For this reason, the NEWS strives to keep you posted on what's going on in the field of home comfort, and to let you know about all the new opportunities in air conditioning.

If you're planning more cooling, as well as heating jobs for next year, you'll be on the lookout for pertinent information more than ever! Chances are you're looking for material on air conditioning to help increase your own perspective—and to give your staff a better background in the field.

The Editors of the NEWS now offer these information-packed books on air conditioning . . .

"AIR CONDITIONING THE HOME" is a comprehensive study, just off the press, on the year-around residential air conditioning situation as it stands in 1955. It is a book you will want to keep for reference; 9" x 12" in size, well printed and abundantly illustrated—a worthy addition to your library.

"THE KEY TO AIR CONDITIONING" is a series of three manuals (K-1, K-2, K-3) that explain in everyday language, problems in air conditioning layout and installation. These books will help you sell more units, and make better installations.

AIR CONDITIONING
& REFRIGERATION

NEWS

The Newspaper of the Industry



450 West Fort Street
Detroit 26, Michigan

THIS IS WHAT YOU WILL FIND IN THESE HELPFUL BOOKS:



HOW MANY WANT IT. Residential air conditioning is expected to hit a goal of 2-million units installed by 1960. Read how market conditions are today—and will be tomorrow. Read many, many reasons why people buy air conditioning, each reason a selling point for you.

HOW TO SELL IT. You'll learn the best financing approach, and price levels of units for different types of residences. Charts show you how to estimate the cost for various types of residential construction.

Air Conditioning the Home

HOW DOES IT WORK. You will find representative installation diagrams and operating characteristics of certain systems. Many of the pitfalls of year-around residential air conditioning work are spelled out. Examples are given on how to estimate heat gain and how to bring the customer into your confidence in making estimates.

FHA REQUIREMENTS. Here in easy-to-read layout is the text of Bulletin ME-12 for quick reference or study.

Only \$1.00 per copy. Use coupon to order copies for each key member of your staff.

The Key to Air Conditioning

MANUAL NO. K-1

PROPERTIES OF AIR. Relationships between atmospheric pressure, gauge pressure and absolute pressure, temperature, specific heat.

HEAT. Flow, relation of dry-bulb, wet-bulb, and dewpoint temperatures.

HUMIDITY. Kinds, permissible relative humidities in winter, spraying required for relative humidities, tables, problems.

PSYCHROMETRIC CHART. Description, application, testing installation, dewpoint lines straight, relative humidity lines, problems.

VENTILATION. Vitiated air, mechanical means, natural means, various exposures, methods of calculation for proper amount of ventilation.

AIR REQUIREMENTS. Air motion, air requirement formulas, tables, graphs, and problems.

REFRIGERATION. Cooling and dehumidifying, proper evaporative cooling, principles of operation, design, refrigeration cycle, power consumption, selection, examples, and graphs.

FANS. Connections to motor, parts of blower fans, types, ordering, selection.

AIR DISTRIBUTION. Grilles, registers, ceiling diffusers, self-contained units, remote type units.

MANUAL NO. K-2

SHEET METAL DUCTS. Various elements of ductwork are explained in detail; flow of air in ducts, and sizing methods.

AIR CLEANING DEVICES. Types of air filters, cleaning efficiency, sizes and capacities, typical arrangements.

HEAT TRANSMISSION COEFFICIENTS. Heat transmission factors of building materials, tables of heat transmission coefficients.

COOLING LOAD. Design conditions, design wet-bulb and dry-bulb temperatures for principal cities, factors to calculate heat gain.

AMOUNT OF AIR THROUGH COOLING COILS. Advantages and disadvantages of passing all air through coils, formulas and charts.

EXPANSION COILS, VALVES, AND COMPRESSORS. Selection, recommended velocities through coils, physical data of coils.

SELECTION OF WATER COOLING COILS. Counterflow principles, dry pre-cooling coils, charts for selecting coils, physical data on water coils.

MANUAL NO. K-3

HEATING. Types of heating systems, location, design conditions, normal heat transmission, problems, steam required, exposure factors.

STEAM HEATING COILS. Selection, nomenclature, installation, air friction, condensations, problems, rating tables.

EVAPORATIVE CONDENSERS. Operation, problems in selection, general data, typical installations.

WATER-COOLING TOWERS. Types, performance, selection, friction head of water tower system, installation diagrams.

AUTOMATIC CONTROLS. Types, description, space temperature, determining type of control, compressor controls, suction pressure control, room control zones, diagrams.

PIPING—REFRIGERANT, WATER, STEAM. Types, tables for sizing, layouts, interconnecting, dynamic and static head, drain lines, steam tables, boiler horsepower, heating systems.



HEAT INSULATION AND SOUND CONTROL. Condensation, application, thickness required, types of insulation, noises in systems, effect of velocity, decibel scale.

ECONOMICS. Advantages, the survey, tonnage estimate, guesstimates for load, amortization, pricing form.

Only \$2.00 each. See them at your parts wholesaler's store, or order with coupon below.

Clip here and MAIL TODAY

Air Conditioning & Refrigeration NEWS, 450 West Fort Street, Detroit 26, Michigan

Please send me the following books:

QUANTITY

..... Air Conditioning the Home, \$1.00 ea.

..... (K-1) The Key to Air Conditioning, \$2.00 ea.

..... (K-2) The Key to Air Conditioning, \$2.00 ea.

..... (K-3) The Key to Air Conditioning, \$2.00 ea.

☐ I enclose check in full amount. 9-26-55

☐ Bill me direct.

Name

Company

Address

City..... Zone..... State.....

Government Contracts

Air Force — Army — Navy

Proposed procurements listed under Department of Defense Purchasing offices include only those procurements which are estimated to exceed \$10,000 in value. Firms desiring to bid on purchases of less than \$10,000 should request the individual purchasing offices to place the name of their firms on appropriate bidders' lists.

Invitations for Bids numbers will be followed by the letter "B". Requests for proposals or quotations will be indicated by the letter "Q" or, if numbered, the number will be followed by the letter "Q".

Government purchasing offices and their complete addresses are shown with each entry.

Data is listed under each Procurement Office in the following sequence: Description of Supply (Article) or Service, Quantity and Unit, Invitation for Bid (IFB) or Proposal Number, and Bid Opening Date or Advanced Issuance Date—except where IFB Number and Bid Opening Date are listed preceding a group of items of supply or service under the same bid set.

Navy

Officer in Charge, Navy Purchasing Office, 180 New Montgomery St., San Francisco, Calif.

Following items are procured under IFB 220-798-56-P2-B—Bid Opening 29 Sept. 55.

CASE, REFRIGERATED, for frozen and packaged meats, 11 ea.—CASE, REFRIGERATED, single duty, self service, for chilled meats, 6 ea.—CASE, REFRIGERATED, self service display, 5 ea.—CASE, REFRIGERATED, self service, for frozen meat, 10 ea.—CASE, REFRIGERATED, self-service, self contained, for ice cream, 18 ea.—CASE, REFRIGERATED, for Chill Produce, 7 ea.—Weber Showcase and Tyler Fixture Co. or equal and Dwg No. A0-N6-1940.

REFRIGERATORS, DOMESTIC, Kelvinator Model KS-110L and KS-110R or equal, left hand opening, 52 ea—right and opening, 52 ea—IFB-220-2234-56-P2-B—Bid Opening 29 Sep 55.

Navy Purchasing Office, 4th & Independence Ave., N.W., Washington, D. C. Attn: APF-1A.

SINK TEMPERATURE CONTROLLED, with refrigerated storage cabinet, for Photolithographic processing film size 24 in. by 30 in. for 115 volt D.C. power per spec MIL-S-17058A dated 19 Nov. 1954, Amendment No. 1 dated 20 Dec 1954 and per additional modifications as indicated in the invitation.—3 ea.—Same except for operation on 115 volt A.C. power—1 ea.—IFB 600-180-56-S—Bid Opening 7 Oct 55.

AIR FORCE

Directorate of Procurement, Air Proving Ground Command, Eglin Air Force Base, Fla.

ADDITIONS AND/OR MODIFICATIONS TO 346 BLOWER UNITS AND VENTILATION SYSTEMS to accommodate standard 20 in. x 20 in. x 2 in. permanent type air filters. Modifications shall consist of alteration to duct work, filter racks, addition of mixing boxes, addition of grease filter racks and/or other changes to insure proper filtering of air—Job—IFB 08-603-56-147B—Bid Opening 30 Sep 55.

The following described services are to be procured under IFB 08-603-56-144—Bid Opening 26 Sep 55.

INSTALLATION OF A 5-TON YEAR-ROUND AIR CONDITIONING SYSTEM in Building No. 39—INSTALLATION OF A 10-TON YEAR-ROUND AIR CONDITIONING SYSTEM in Building No. 35—INSTALLATION OF A 5-TON SUMMER AIR CONDITIONING SYSTEM in Building No. 640. The Air Conditioning Systems include: self contained air conditioning units; cooling towers; sheet metal ducts; Registers, Grilles, Louvers and Diffusers; Piping; Automatic controls; electrical work and painting of new work.

Truck Refrigeration --

(Concluded from Page 1, Col. 3)

A. Miller, Hunter Mfg. Co., on "Dry ice refrigeration."

W. S. Schok Dow Chemical Co., on "Use of expanded polystyrenes for low temperature insulation applications"; Harold Johnson, U. S. Department of Agriculture, on "Recent developments and results of research studies in more efficient handling and transportation methods in mobile truck refrigeration."

Refrigeration firms among the exhibitors include the following: Coldmobile Div., Union Asbestos & Rubber Co.; Copeland Refrigeration Corp.; Dole Refrigeration Mfg. Corp.; Lehigh Mfg. Co.; U. S. Thermo Control Refrigerating Co.; Kold-Hold Div., Co.



R. R. FORSEILLE



W. E. KAHLERT

Baltimore Aircoil --

(Concluded from Page 1, Col. 5)

Engalitcheff said William E. Kahlert, who was formerly with The Trane Co. and McQuay, Inc., has assumed the duties of production manager.

Pentecost has been affiliated with the company since 1950. He is now the official Baltimore Aircoil Co. representative in Maryland, maintaining an office at 2615 Mathes St., Baltimore.

Locker Plants Serve Home Freezers --

(Concluded from Page 1, Col. 5)

three classifications—locker operators, frozen food centers, and freezer food suppliers—which meant dues increases for 60% of the membership, had resulted in a drop of 22% in membership but an increase of 18% in income.

He expressed confidence that the increased promotional and activities program of the association would bring back many of the members who had dropped out.

L. B. Mann of the U. S. Department of Agriculture reported that a survey made by the USDA found 10,500 locker plants in operation in this country at the first of the year. This is a loss of nearly 1,000 plants since the peak year of 1951.

Plant Lockers Dropped From 459 to 436

Average installed lockers in plants dropped from 459 in 1950 to 436 in 1955. Rented lockers averaged 342 per plant on Jan. 1, 1955 as compared with 387 in 1950, and 464 in 1946.

However, he said, the number of locker and home freezer patrons served increased from 4,300,000 in 1950 to more than 5,000,000 in 1955, or nearly one out of eight families.

Big Increase with Home Freezer Customers

"During the past five years," Mann declared, "the big increase in patrons served by locker plants has been with home freezer customers, as locker patrons declined 600,000 from 3,900,000 in 1950 to 3,300,000 in 1955."

"The average number of home freezer patrons who did not rent lockers averaged 175 per plant in 1955 as compared with 39 in 1950. For the entire industry this represents an estimated increase from nearly 450,000 in 1950 to about 1,850,000 in 1955."

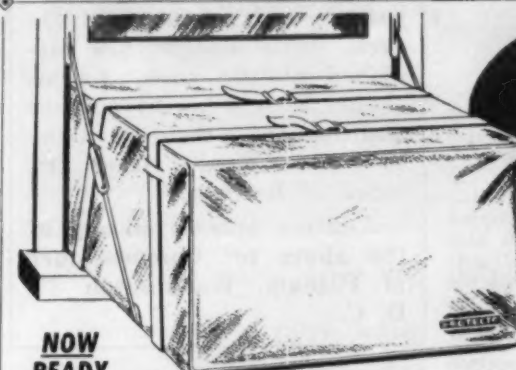
"It should be pointed out, however, that this does not

represent the total number of home freezer users served, as many locker patrons also have home freezers.

"In the 1950 survey, 11% of the locker patrons were home freezer users. Today this pro-

portion is probably substantially higher and the number of home freezers serviced by locker plants will probably run between 2 and 2½ million," he added.

Mann's survey also uncovered the facts that 16% of locker plants operated food plans and 15% sold home freezers.



MONEY MAKER for Alert Dealers

Sell one for every room cooler in your territory. This cover gives secure protection in the worst weather—made of heavy-duty water-repellent canvas, with extra strong web straps. Fits all models, all mountings, all floor levels. Quickly and easily installed.

NOW READY FOR IMMEDIATE DELIVERY

Retails for \$4.95 (worth twice that)

40% Dealer Discount

Ask about Dealership

ALL-NEW

"PROTECTO" Air Conditioner COVER

Write or wire: BAKER LOCKWOOD • 2900 Cherry St. • Kansas City 8, Mo.

ENGINEERS—REFRIGERATION AIR CONDITIONING

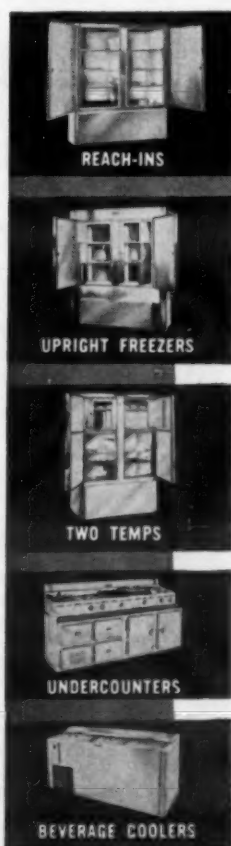
Expansion program and addition of new product lines for strong, progressive, well-established refrigerator manufacturer provides unusual opportunity and challenging positions for experienced engineers qualified in

DESIGN - RESEARCH - DEVELOPMENT

for refrigeration systems, refrigerator cabinets, air conditioners, freezers, dehumidifiers, evaporators, condensers, rotary compressors, application, and test. Location: southern Indiana. Excellent opportunity for advancement plus good employee benefits. Salary commensurate with ability and experience. Our engineers know of these openings. In confidence send detailed resume and salary progression to: Mr. R. T. Mankus,

GEORGE FRY & ASSOCIATES Management Consultants

135 South La Salle Street — Chicago 3, Illinois.



ORIGINATOR AND OLDEST CONTINUOUS MANUFACTURER OF Welded All Aluminum REFRIGERATORS AND FREEZERS Designed and engineered for heavy duty performance

FOSTER BUILDS OVER 200 MODELS OF MATCHED PRODUCTS ONLY ONE TOP QUALITY LINE! NO 2ND OR 3RD LINES!

Whether it's for a hotel, restaurant, school, hospital, or any institutional user — there's a model designed specifically to fit individual needs.

Foster has had long and successful experience in building welded all-aluminum refrigerators and freezers for installations all over the world. They have met every in-the-field test for strength, durability and long life.

Thousands upon thousands of satisfied users know that Foster meets the most exacting specifications, the most critical demands of hard, day to day use, year after year.

And most important—they're priced low and right!

EXCLUSIVE SALES FEATURES CLOSE ORDERS SELECTIVE DISTRIBUTION INSURES PROFITS!

NATIONWIDE FACTORY TRAINED REGIONAL SALES MANAGERS FOR SALES AND SERVICE.

FOSTER REFRIGERATOR CORP. HUDSON, N. Y.

For more information write to Box 32.

AUTO-LITE

TEMPERATURE RECORDING...

Newly designed, Model "1000" Auto-Lite Recorder gives permanent proof of temperature behavior. • 6" clear reading chart; various standard ranges from minus 40°F. to plus 550°F. • 3 standard types; choice of 24-hr. or 7-day cycle. • Electric or mechanical chart drive. • With capillary tubing for remote reading. Priced from \$49.50. Send for new catalog describing many styles of Auto-Lite temperature Recorders and Indicators.

Model "1000"

THE ELECTRIC AUTO-LITE COMPANY
INSTRUMENT AND GAUGE DIVISION
TOLEDO 1, OHIO
NEW YORK • CHICAGO • SARNIA, ONTARIO

TEMPERATURE RECORDERS

PATENTS

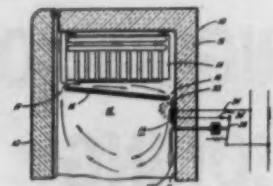
Week of July 5
(Continued)

2,712,224. ICE TRAY. John H. Roethel, Detroit, Mich., assignor to Roethel Engineering Corp., Detroit.



2 A flexible plastic liquid freezing receptacle comprising a generally rectangular bottom and upstanding side walls terminating in rim flanging extending outwardly from said side walls continuously around the four upper marginal edges of the receptacle, said rim flanging having a depressed portion at a side thereof intermediate the ends of the flanging at such side, the sides and bottom of said depressed portion being in the form of a continuous flange with the bottom portion thereof disposed at a lower level than the adjacent portions of the rim flanging at opposite ends of said depressed portion.

2,714,437. TEMPERATURE CONTROL APPARATUS FOR REFRIGERATORS. Lloyd A. Staebler, Orlan, Pa., assignor to Philco Corp., Philadelphia, Pa.



1. In refrigeration apparatus, a cabinet, a baffle or partition disposed within said cabinet and separating the space therein into upper and lower compartments, the upper of said compartments having cooling means in heat exchange relation therewith, and said baffle being so shaped and disposed within said cabinet as normally to provide for limited circulation of cooling air between said two compartments, the construction and arrangement being such that the circulating air normally flows upwardly past one

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office and offer only a brief summary of each invention. Printed copies of patents, reissued patents, and patent designs may be secured from the Patent Office; patents and reissues are 25¢ each, while designs are furnished at 10¢ each. Copies should be ordered by number and title and a mention of the fact if they are either Designs or Reissues.

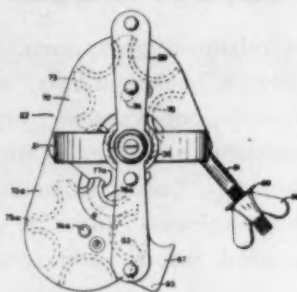
Address orders for any of the above to: Commissioner of Patents, Washington 25, D. C.

portion of said baffle into heat exchange relation with said cooling means and thereafter flows downwardly into the lower compartment past another portion of said baffle spaced from the said one portion, and means preventing over-cooling of said lower compartment, comprising: means adapted to add heat to the cabinet in the path of the current of air which normally flows downwardly past the stated other portion of the baffle; and means responsive to temperature conditions prevailing within said lower compartment to control operation of said heating means.

(To Be Continued)

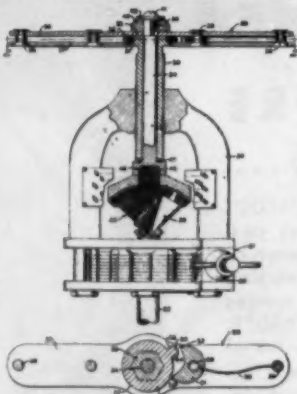
(Editor's Note: The following group of four patents was inadvertently omitted from the listing of patents for the week of June 28. The News presents them here to complete the listing for that date.)

2,711,576. TUBE CLAMPING MEANS. Frank R. Wilson, Memphis, Tenn. Original application March 1, 1952, Serial No. 274,403. Divided and this application Oct. 16, 1953, Serial No. 386,577. 7 Claims. (Cl. 29-284.)



3. A tube flaring tool comprising a two-legged yoke, a pair of spaced base plates secured to the legs of said yoke, another pair of spaced base plates hinged on one of the legs of said yoke for opening and closing movements relative to said first-mentioned pair of base plates, a tube clamping member received in the space between the base plates of each of said pairs of base plates, said members each having a plurality of semi-cylindrical slots of different sizes formed in the outer edges thereof and being mounted on said base plates for rotation about an axis parallel to and equidistant from the central axis of each of said slots, and means for clamping the pairs of base plates together with a slot in one clamping member matching a slot in the other clamping member to form therewith a tube clamping cylinder.

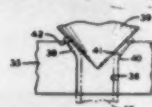
2,711,771. TUBE FLARING TOOL. Frank R. Wilson, Lexington, Ky.



1. A tube flaring tool comprising a hollow sleeve member having a screw thread on one cylindrical surface and being smooth on the other cylindrical surface, a yoke member having an aperture for receiving and supporting said sleeve member for rotation, the surface of said aperture conforming to the outer surface of said sleeve member, a shaft member passing through said hollow sleeve member and supported for rotation by said sleeve member, said shaft member having an outer surface thereon conforming to the inner surface of said sleeve member, one of said above-named surfaces of the aperture and shaft member

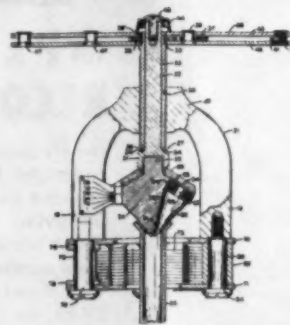
having a screw threaded surface thereon meshing with the screw threaded surface on said sleeve member and the other of said surfaces being smooth and in contact with the smooth surface of said sleeve member, a clamping means supported on said yoke member for holding the tube to be flared, a flaring cone secured to one end of said shaft member, means on the other end of said shaft member for turning the same, the thrust of the cone on the work being resisted by the two members having the meshing screw threaded surfaces, an anti-friction bearing for absorbing the axial thrust between the two members having the smooth contacting surfaces to enable free turning movement between said smooth contacting surfaces, and coupling means for controlling the relative turning movement between the two members having the smooth contacting surfaces to provide automatic burnishing of the flare, said means including drive means connected with one of said two members having the smooth contacting surfaces and a shiftable element connected with the other of the two members having the smooth contacting surfaces, said element being movable by said drive means relative to its associated member between a first position in which it coacts with said drive means to prevent relative turning movement between said two members having the smooth contacting surfaces when the shaft member is turned in one direction to enforce relative rotation between the two members having the meshing screw threaded surfaces and cause said cone to be fed into the tube, and a second position in which it coacts with said drive means to prevent relative turning movement between said two members having the smooth contact surfaces after the shaft member has been turned a predetermined distance in the reverse direction to enforce relative turning movement between the two members having the meshing screw threaded surfaces and cause the cone to be retracted, relative rotation between the two members having the smooth contacting surfaces being effected during turning of the shaft member through said predetermined distance by virtue of the combined action of the anti-friction bearing and the frictional restraint between the two members having the meshing screw threaded surfaces so as to cause the cone to turn without feed and effect burnishing of the flare.

2,711,772. TUBE CLAMPING DIE. Frank R. Wilson, Memphis, Tenn.



1. A tube clamping device for use with a tube flaring tool having a flaring cone comprising a pair of separable dies each having one or more semi-cylindrical recesses formed therein, the recesses in one of said dies being complementary to the recesses in the other of said dies, a chamfer on the upper edge of each recess for supporting the outer face of the flare as it is formed on the end of the tube, and means for providing a transition fillet portion between the cylindrical wall portion of the tube being flared and the conical wall portion of the flare, said means including a relieved die wall surface extending circumferentially around the base of each chamfer and restricted to the transition fillet portion of the tube so as to prevent contact of the outer face of said transition fillet portion of the tube with the relieved die wall surface resulting from the application of a normal axial force to said flaring cone during the flaring or burnishing operation.

2,711,774. FLARING CONE. Frank R. Wilson, Memphis, Tenn. Original application March 1, 1952, Serial No. 274,403. Divided and this application Oct. 16, 1953, Serial No. 386,445. 14 Claims. (Cl. 153-81.)



3. A flaring cone comprising a body, a plurality of conical flaring rollers, and means on said body for supporting each of said rollers for rotation about its axis of symmetry with the tip of each roller lying substantially in contact with the tips of the other rollers and with the symmetrical axes of the rollers coinciding with the surface of a cone whose apex coincides with the apices of the rollers, said means including a plurality of open-sided recesses in said body each having a conical surface complementary to the conical surface of its associated roller to form a bearing surface for supporting the roller for rotation on said body.

June NEMA Freezer Sales Hit 77,527

Summary for June and First Six Months, 1955

Electric Farm and Home Freezers—Complete—Sales by Sizes—Units

Farm and home freezers complete with high and low side and cabinet where 50% or more of the net cabinet capacity is designed for freezing and/or storage of frozen foods.

Sizes	JUNE (22 Companies)		Foreign	Total
	Domestic	Canadian		
1. 6 cu. ft. (6.4 & under)				
Chest Models	*	*	*	*
Upright Models	†	†	†	†
2. 7 & 8 cu. ft. (6.5 to 8.4)				
Chest Models	*4,654	*346	*406	*5,406
Upright Models	†298	†	†2	†300
3. 9 & 10 cu. ft. (8.5 to 10.4)				
Chest Models	1,728	55	98	1,881
Upright Models	†	†	†	†
4. 11 & 12 cu. ft. (10.5 to 12.4)				
Chest Models	6,301	90	222	6,613
Upright Models	†10,091	†292	†250	†10,633
5. 13 & 14 cu. ft. (12.5 to 14.4)				
Chest Models	5,060	435	307	5,802
Upright Models	5,098	169	297	5,564
6. 15 cu. ft. (14.5 to 15.4)				
Chest Models	6,891	142	43	7,076
Upright Models	†	†	†	†
7. 16 & 17 cu. ft. (15.5 to 17.4)				
Chest Models	6,050	79	18	6,147
Upright Models	†8,753	†89	†46	†8,888
8. 18 & 19 cu. ft. (17.5 to 19.4)				
Chest Models	4,852	101	112	5,065
Upright Models	5,397	27	49	5,473
9. 20 & 21 cu. ft. (19.5 to 21.4)				
Chest Models	5,520	358	15	5,893
Upright Models	†	†	†	†
10. 22 cu. ft. (21.5 and over)				
Chest Models	515	2	5	522
Upright Models	†2,192	†	†72	†2,264
Total Chest Models	41,571	1,608	1,226	44,405
Total Upright Models	31,829	577	716	33,122
Total All Models	73,400	2,185	1,942	77,527

FIRST SIX MONTHS, 1955

Sizes	Domestic		Foreign	Total
	Domestic	Canadian		
1. 6 cu. ft. (6.4 & under)				
Chest Models	*	*	*	*
Upright Models	†	†	†	†
2. 7 & 8 cu. ft. (6.5 to 8.4)				
Chest Models	*18,777	*979	*1,288	*21,044
Upright Models	†1,537	†28	†54	†1,619
3. 9 & 10 cu. ft. (8.5 to 10.4)				
Chest Models	10,912	443	642	11,997
Upright Models	†	†	†	†
4. 11 & 12 cu. ft. (10.5 to 12.4)				
Chest Models	30,254	818	954	32,026
Upright Models	†38,657	†1,064	†1,142	†40,863
5. 13 & 14 cu. ft. (12.5 to 14.4)				
Chest Models	32,553	1,572	939	35,064
Upright Models	32,023	553	1,481	34,057
6. 15 cu. ft. (14.5 to 15.4)				
Chest Models	35,121	951	330	36,402
Upright Models	†	†	†	†
7. 16 & 17 cu. ft. (15.5 to 17.4)				
Chest Models	28,082	621	102	28,805
Upright Models	†45,759	†750	†336	†46,845
8. 18 & 19 cu. ft. (17.5 to 19.4)				
Chest Models	19,643	8,477	540	21,030
Upright Models	26,882	214	224	27,320
9. 20 & 21 cu. ft. (19.5 to 21.4)				
Chest Models	23,737	993	70	24,800
Upright Models	†	†	†	†
10. 22 cu. ft. (21.5 and over)				
Chest Models	2,984	39	26	3,049
Upright Models	†9,925	†3	†72	†10,000
Total Chest Models	202,063	7,263	4,891	214,217
Total Upright Models	154,783	2,612	3,309	160,704
Total All Models	356,846	9,875	8,200	374,921

*Chest Models for items 1 & 2 combined because of possible disclosure of individual company data.

†Upright Models for items 1 & 2 combined because of possible disclosure of individual company data.

‡Chest Models for items 3 & 4 combined because of possible disclosure of individual company data.

§Upright Models for items 6 & 7 combined because of possible disclosure of individual company data.

¶Upright Models for items 9 & 10 combined because of possible disclosure of individual company data.

Participating companies: Admiral Corp.; Ben-Hur Mfg. Co.; Carrier Corp.; Crosley & Bendix Home Appliances Div.; Avco Mfg. Corp.; Deepfreeze Appliance Div.; Motor Products Corp.; Frigidaire Div.; General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. of General Electric Co.; International Harvester Co.; Kelvinator Div.; American Motors Corp.; Maytag Co., The; Norge Div.; Borg-Warner Corp.; Philco Corp.; Appliance Div.; Quicref, Inc.; Recvo, Inc.; Seeger Refrigerator Co.; Servel, Inc.; Sub-Zero Freezer Co., Inc.; Victor Products Corp.; Westinghouse Electric Corp.; Wilson Refrigeration, Inc.

Freezer Sales by States by Distributors

Summary for First Six Months, 1955
Sales of Electric Farm and Home Freezers—Complete by Distributors to Dealers—By States

Reports from 15 companies	
States	Units
Alabama	6,281
Arizona	547
Arkansas	4,330
California	7,802
Colorado	2,341
Connecticut	2,365
Delaware	606
District of Columbia	2,818
Florida	5,899
Georgia	8,736
Idaho	1,136
Illinois	10,195
Indiana	8,192
Iowa	7,202
Kansas	3,135
Kentucky	4,276
Louisiana	6,924
Maine	869
Maryland	2,926
Massachusetts	1,803
Michigan	7,820
Minnesota	5,787
Mississippi	4,861
Missouri	7,913
Montana	1,194
Nebraska	4,380
Nevada	225
New Hampshire	267
New Jersey	4,149
New Mexico	998
New York	9,521
North Carolina	7,133
North Dakota	2,679
Ohio	13,200
Oklahoma	2,583
Oregon	3,118
Pennsylvania	15,609
Rhode Island	239
South Carolina	3,599
South Dakota	2,967
Tennessee	6,987
Texas	13,937
Utah	822
Vermont	301
Virginia	4,406
Washington	3,149
West Virginia	3,281
Wisconsin	5,157
Wyoming	420
Total United States	225,115

Participating companies: Admiral Corp.; Crosley & Bendix Home Appliances Div.; Avco Mfg. Corp.; Deepfreeze Appliance Div.; Motor Products Corp.; Frigidaire Div.; General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. of General Electric Co.; International Harvester Co.; Kelvinator Div.; American Motors Corp.; Maytag Co., The; Norge Div.; Borg-Warner Corp.; Philco Corp.; Appliance Div.; Quicref, Inc.; Recvo, Inc.; Seeger Refrigerator Co.; Servel, Inc.; Sub-Zero Freezer Co., Inc.; Victor Products Corp.; Westinghouse Electric Corp.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words, 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words, 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

SALESMAN, EXPERIENCED, sales management, distributor-dealer development, would like to contact a manufacturer or distributor in the air conditioning and refrigeration industry that can use a salesman to cover western Michigan. Your inquiry confidential. Resume of experience upon request. BOX A5326, Air Conditioning & Refrigeration News.

MANUFACTURERS' REPRESENTATIVE with over 25 years' experience in all phases of industrial refrigeration and air conditioning located in New York City and surrounding area, at present working with design engineers and selling to contractors, seeks additional air conditioning and refrigeration items. Write BOX A5334, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION SERVICE engineer with commercial refrigeration experience (preferably food store type equipment). This man would work with our engineering department in plant and must also be willing to travel. Replies held confidential. Include complete resume experience, salary expected and references. FEDERAL REFRIGERATOR MFG. CO., Waukesha, Wisconsin.

EQUIPMENT WANTED

WANTED: ANY amount Frigidaire relays, YG2 type. Will pay 25¢ each. Ship in and will mail check. UNITED CONTROLS, 342 West 70th Street, New York 23, N. Y.

EQUIPMENT FOR SALE

REFRIGERATION VALUES: Attention servicemen; send for catalog of refrigeration parts; savings up to 50%. WALTER W. STARR REFRIGERATION SUPPLIES, 2833 Lincoln Ave., Chicago 13, Illinois.

For more information about products advertised on this page use Information Center, page 14.

Servicing Automobile Air Conditioners

BY C. DALE MERICLE

With this instalment we begin discussion of another make of automobile air conditioner—that employed by Buick Motor Div. as a factory-installed accessory.

Makes previously discussed in this series included A.R.A. (June 13, 20, and 27), Frigikar (July 4 and 11), Automotive Air Conditioning (July 18 and 25), Pivot (Aug. 1 and 8), Novi (Aug. 15 and 22), and Oldsmobile (Aug. 29, Sept. 5, 12, and 19).

Additional makes will be featured in future instalments.

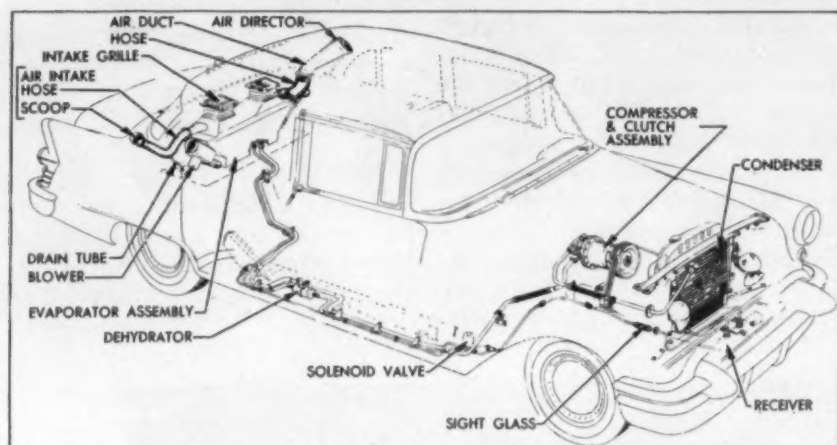


FIG. 1 shows a 1953 Buick air conditioner installation.

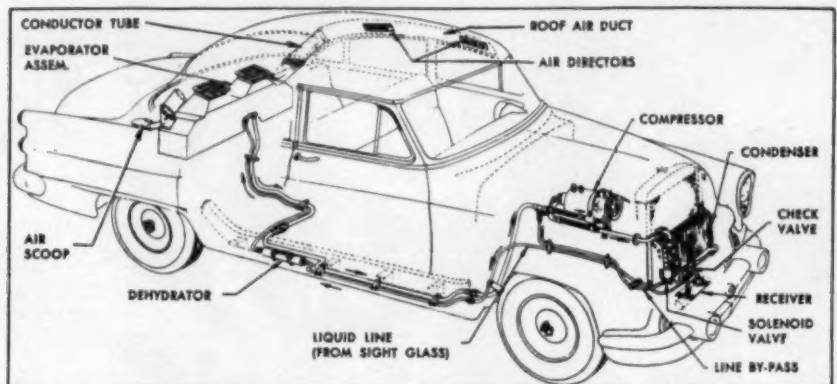


FIG. 2—Changes over previous models can be seen in this diagram of early 1955 Buick installation.

BUICK-(1)

Buick Motor Div.
General Motors Corp.
Flint 2, Mich.

DESCRIPTION

Air conditioning was first made available by Buick as a factory-installed accessory on 1953 models. (See Fig. 1).

Although numerous changes in design were introduced in 1954 and 1955 models, the basic arrangement of major components is the same for all three models. The compressor is driven off the car engine, the condenser mounts in front of the radiator, and the evaporator-blower assembly is installed in the trunk of the car. (See Fig. 2).

It would be well to caution servicemen at the outset that the year of the car does not necessarily denote the model of air conditioner. Because Buick permits its dealers to install air conditioning, it is not unlikely that 1953 or 1954 Buicks may be found with 1955 model air conditioners.

Dealers will normally install the latest type air conditioner that is available, provided, of course, the design will fit the model of car in question.

Refrigerant employed in the Buick system is "Freon-12." Charge is 7 lbs. in 1953 and 1954 models, 5 lbs. in 1955 models.

Compressor

Buick employed the Frigidaire rotary vane compressor on 1953 and 1954 systems, but for

1955 switched to the new Frigidaire axial type reciprocating compressor with five cylinders.

No clutch was provided for the 1953 system, the compressor running whenever the car engine does unless the drive belts has been removed, of course.

A solenoid-operated clutch was introduced on 1954 models so that the compressor would operate only when the control switch was turned on. The 1954 design uses an externally mounted solenoid which actuates the clutch through a lever arrangement.

Clutch on 1955 has a built-in solenoid.

Discharge service valve of the 1953-54 compressor (Fig. 3) is at the end opposite the pulley, and the suction service valve is at the pulley end. Separate gauge ports are provided on top of the compressor, with the low-side port being at the pulley end, and the high-side port to the rear. These gauge ports are equipped with Schrader valve connections. Beside the high-side gauge port on top is the pressure relief valve, which opens at 375 p.s.i.g. and closes at 350 p.s.i.g.

Also included in the 1953-54 compressor is an oil level test plug that includes a Schrader type relief valve. This assembly is on the bottom at the end opposite the pulley.

On the 1955 compressor suction and discharge service valves, which have gauge ports, are on the back of the compressor opposite the pulley end, the discharge valve being above the

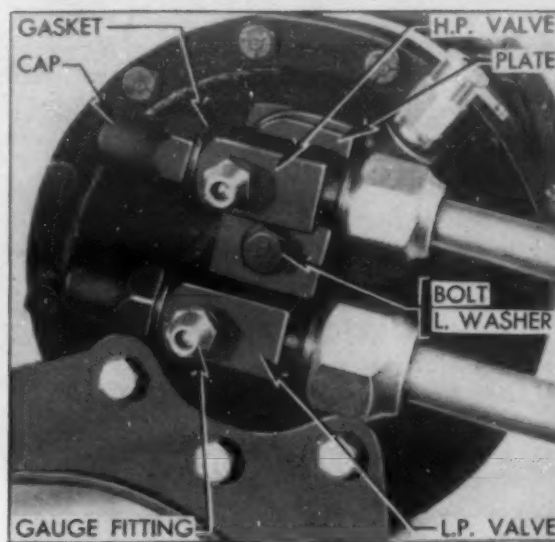


FIG. 4 shows service valves of compressor on 1955 Buick air conditioner.

suction service valve. (See Fig. 4).

A pressure relief valve, which opens at approximately 415 p.s.i.g., and an oil level test plug are included on the 1955 compressor. (To Be Continued)

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"My Typhoon District Manager is always Johnny-on-the-spot," says Don Kissell (left), Typhoon Los Angeles dealer.

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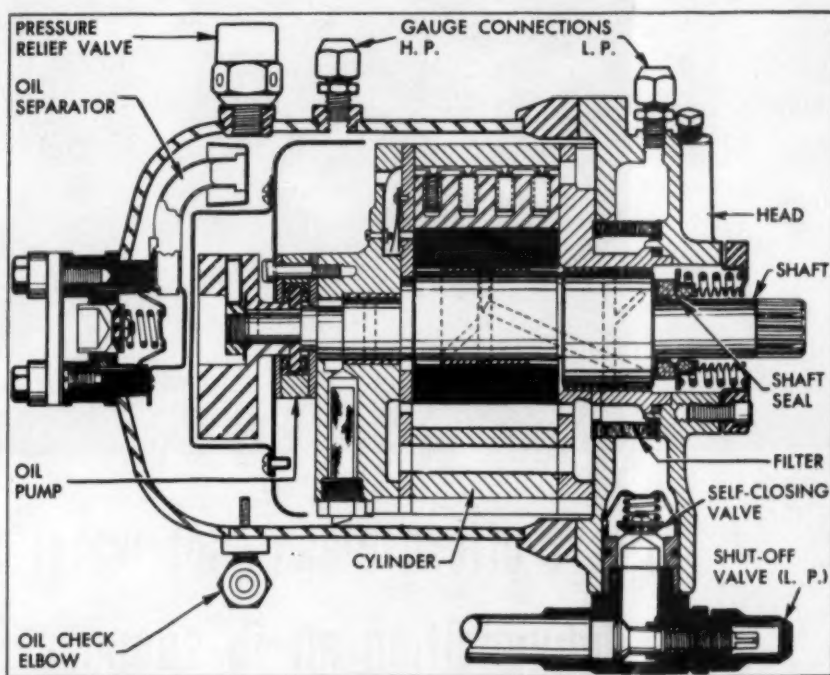
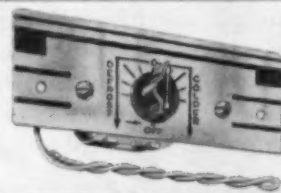


FIG. 3—Cross-section view of compressor employed on 1953-54 Buick air conditioners.

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Copper Situation Brightens--

(Concluded from Page 1, Col. 2) everything in its path under millions of tons of mud and silt. In one plant alone, it is estimated that 65,000 tons of mud and silt was deposited in depths ranging from 18 in. to 6 ft.

Biggest problem confronting the copper and brass mills is the cleaning and repairing of electrical installations. Tens of thousands of electric motors of all sizes must be cleaned, baked out, and checked. Intricate machinery and equipment, such as casting furnaces, rolling mills, extrusion presses, draw benches, annealing furnaces, and countless fabricating machines, must be completely disassembled, cleaned, repaired, checked, and reassembled. The fine silt penetrated everywhere and all machinery must be inspected.

Blue jeans and boots are the uniform of the army of workers. Female office workers also are garbed in blue jeans and slacks as they labor to salvage company records. Appreciation also is expressed to such firms as Allis Chalmers, General Electric, and Westinghouse—and numerous local electrical contractors—all of whom have assisted in the restoration of electrical motors and equipment.

Up and down the valley, production is commencing as machines and motors are restored to serviceable condition. This will continue day by day and week by week until full operation is achieved. Today, machines are humming and copper and brass mill products are being shipped out of the valley.

Following is a rundown of the situation in the affected mills:

The American Brass Co., Waterbury, Conn.—various divisions have resumed partial production which will increase gradually as additional equipment is restored to serviceable condition. Principal damage suffered by Torrington, Waterbury, and Ansonia Divs. It is expected that full operation will be achieved by Nov. 1.

Chase Brass & Copper Co., Inc., Waterbury, Conn.—pri-

mary damage was in Chase Metal Works Plant at Waterbury. Progress in restoration is remarkable. Departments will be in operation as equipment is restored with full-scale production estimated for Nov. 1.

New Haven Copper Co., Seymour, Conn.—all furnaces have been dried out. Biggest task is dismantling and cleaning of main breakdown mill. It is expected that the plant will be in full operation by Oct. 1.

Seymour Mfg. Co. (and Phosphor Bronze Corp.), Seymour, Conn.—severe damage suffered, but progress in cleanup and restoration of equipment is remarkable. Production will be resumed with full operation expected by Oct. 1.

Waterbury Rolling Mills, Inc., Waterbury, Conn.—Casting operations began on Sept. 6.

Chicago Water--

(Concluded from Page 1, Col. 4) pointed out. Many cities have passed ordinances banning installation of conditioners without water-saving devices, it was stated.

The Chicago official said that some cities have been considering extra charges for non-water-conserving air conditioning systems. A charge of \$40 per ton of cooling capacity per year is a figure often used in these considerations, he said.

"A lot of cities are putting in a demand charge to pay for the cost of having water-pumping capacity standing by to meet this occasional need," Gersten said.

"We aren't proposing that as yet. But we do want to get a fair income for the service we provide for air conditioners and the plant capacity we have to

have available. If this keeps up we'll have to find some way of getting adequate compensation for this service."

Gersten said Chicago plans to spend \$145 million for expanding its water system in the next five years—much of it as the result of demands from air conditioning users.

California Boom--

(Concluded from Page 1, Col. 4) ers were caught shorthanded on merchandise.

"As for the larger commercial packaged units, a slight increase was noted, but I feel the results will be felt in the next few months and next spring.

"This heat spell convinced the last of the 'doubters' that air conditioning is an absolute necessity in Los Angeles. The public was refusing to walk into a non-air conditioned establish-

ment, and many restaurant people lost enough business in that 8-day period to have paid for an air conditioner."


Some of the need for air conditioning in the area was of a near-emergency character. A nursery ward in a Long Beach hospital, for example, found that temperatures of infants were shooting up to 104° and higher, and called for donations of air conditioners to help them out of the emergency.

Two Los Angeles city councilmen entered recommendations calling for the air conditioning of the Los Angeles city hall at a cost of about \$1,300,000.

Butler Moves

DAYTON — Butler Heating and Air Conditioning Co. here has moved to a new building at 120 Springfield St., Robert L. Butler, president, announced recently.



The  dual-vector* offers clean, hot water heat in winter
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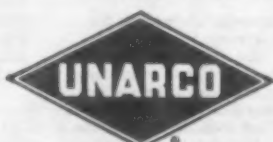
The UNARCO DUAL-VECTOR is a quality product newly designed to make economically feasible the combination of a fine hot water heating system and a chilled water cooling system.

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or chilled water cooling using the same system.

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